

# Enthalpies of Sublimation of Organic and Organometallic Compounds. 1910–2001

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A compendium of sublimation enthalpies, published within the period 1910–2001 (over 1200 references), is reported. A brief review of the temperature adjustments for the sublimation enthalpies from the temperature of measurement to the standard reference temperature, 298.15 K, is included, as are recently suggested values for several reference materials. Sublimation enthalpies are included for organic, organometallic, and a few inorganic compounds. © 2002 American Institute of Physics.

Key words: compendium; enthalpies of condensation; evaporation; organic compounds; organometallic compounds; sublimation; sublimation enthalpy.

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## 1. Introduction

Sublimation enthalpies are important thermodynamic properties of the condensed phase. Frequently they are used in correcting enthalpies of formation to the gas phase and in evaluating environmental transport properties.<sup>1,2</sup> Sublimation enthalpy measurements are also useful to studies of polymorphism and predictions of molecular packing. The measurements provide benchmark numbers that can be used to validate the calculations.<sup>3</sup> Examination of the data in this compendium will reveal some large discrepancies in reported enthalpies of sublimation. It is likely that some of the discrepancies reported by different laboratories are due to measurements made on different polymorphic modifications.<sup>4</sup> Sublimation enthalpy measurements also can reveal differences in interactions in chiral solids and their racemic modifications. Very little experimental work has been reported in this respect.<sup>5,6</sup>

Our interests in sublimation enthalpies goes back nearly 3 decades.<sup>5</sup> Initially interested in using sublimation enthalpies to correct enthalpies of formation data to a standard state, we have since focused our attention on their measurement,<sup>7</sup> estimation,<sup>8</sup> and assessment.<sup>9</sup> In a parallel study, a compilation of available sublimation enthalpies was initiated in the 1980s.<sup>5</sup> A reasonably exhaustive version of this database covering the literature up to the mid 1990s is available on line at <http://webbook.nist.gov/chemistry/>. The present version updates this compilation to the year 2001. Although our intent has been to provide an exhaustive coverage of the literature from 1910 to 2001, this listing is probably still far from complete.

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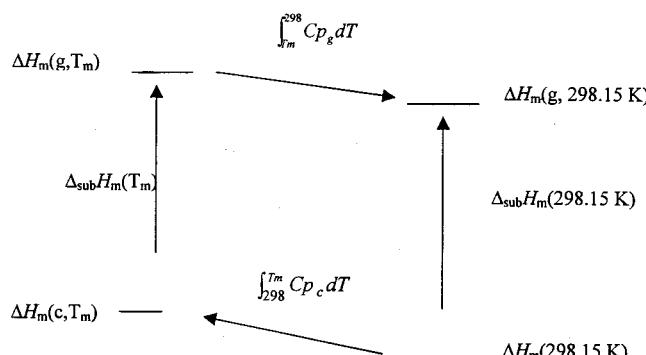


FIG. 1. A thermodynamic cycle for adjusting sublimation enthalpies to 298.15 K.

## 2. Heat Capacity Adjustments

Sublimation enthalpies are measurements based on mass transport and as such are directly or indirectly dependent upon vapor pressure. The vapor pressure of different solids at the same temperature can vary by many orders of magnitude. In order to obtain a reasonable amount of mass transport, it is frequently necessary to conduct these measurements at temperatures that differ substantially from the standard reference temperature, 298.15 K. The actual temperature of measurement depends on the sensitivity of the instrument or apparatus and the properties of the substance. In addition, these measurements are often conducted as a function of temperature.

The magnitude of the sublimation enthalpy is dependent on temperature. Figure 1 and Eqs. (1) and (2) illustrate the origin of this temperature dependence in terms of a thermodynamic cycle. If the heat capacities of the solid and gas phase are known,  $C_{p_c}$  and  $C_{p_g}$ , respectively, then the sublimation enthalpy at 298.15 K can be related to the experimental measurements by using Eq. (1). This equation, generally referred to as Kirchhoff's equation, can be used to adjust sublimation enthalpy measurements to any reference temperature.  $T_m$  represents either the temperature of measurement for calorimetric measurements or the mean temperature of measurement for experiments conducted over narrow ranges of temperature. Treating the heat capacities of the two phases as independent of temperature and integrating Eq. (1) results in Eq. (2). Since the magnitude of the heat capacity of the gas phase is usually smaller than that of the solid phase ( $c$ ), sublimation enthalpies increase with decreasing temperature.

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) + \int_{298.15}^{T_m} (C_{p_c} - C_{p_g}) dT, \quad (1)$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) \approx \Delta_{\text{sub}}H_m(T_m) + (C_{p_c} - C_{p_g})(T_m - 298.15). \quad (2)$$

Experimental heat capacities for many solids at 298.15 K are available.<sup>10</sup> Experimental gas phase heat capacities for compound that are solids at 298.15 K are unavailable and generally need to be estimated. Gas phase heat capacities can be calculated from statistical mechanics or estimated by group additivity methods.<sup>11</sup> A number of group additivity methods have been developed to estimate gas phase heat capacities.<sup>11–13</sup> However, group values for some functional groups are not available. This has encouraged the development of other estimation methods. Table 1 briefly summarizes the various equations that have been used in place of the second term in Eq. (2).

Equation (3) can easily be derived by assuming that the gas is ideal and that the Dulong–Petit value of 3RN holds for the solid, where the term R represents the gas constant and N is the number of atoms/molecule.<sup>5</sup> A similar relationship but characterized by a temperature coefficient of 6R [Eq. (4)] has been suggested by Pedley.<sup>14</sup> Temperature coefficients of 40 J mol<sup>-1</sup> have been used by Melia and Merrifield,<sup>15</sup> and a value of 60 J mol<sup>-1</sup> has been used by de Kruif *et al.*<sup>16</sup> for a series of amino acids and peptides.

A major limitation of most of the equations listed in Table 1 is that the heat capacity adjustments are treated as universal constants independent of molecular structure. Only Eq. (7) is sensitive to differences in molecular structure. This equation was derived from a correlation using estimated heat capacities of the solid at 298.15 K.<sup>17</sup> This correlation was developed from the observed dependence of the temperature adjustment on both molecular structure and size.<sup>17</sup> Experimental or estimated values of  $C_{p_c}(298.15 \text{ K})$  can be used in this equation.

Previous work has demonstrated that Eq. (7) gives results that are generally as good as or better than the use of the other equations in Table 1.<sup>7,8(b),18</sup> The use of Eq. (7) should be limited to the temperature range 200–500 K. A standard deviation of  $\pm 33 \text{ J mol}^{-1}$  has been associated with the term:  $[0.75 + 0.15C_{p_c}(298.15 \text{ K})]$ . The total uncertainty of the temperature adjustment depends on both the magnitude of  $C_{p_c}$  and  $T_m$ . In applications, an uncertainty of one-third of

TABLE 1. Equations for the temperature adjustments of sublimation enthalpies

Corrections for the sublimation enthalpies (J mol <sup>-1</sup> )	Equation	Reference
$(C_{p_c} - C_{p_g})(T_m - 298.15) = 2R[T_m - 298.15]$	(3)	5
$(C_{p_c} - C_{p_g})(T_m - 298.15) = 6R[T_m - 298.15]$	(4)	14
$(C_{p_c} - C_{p_g})(T_m - 298.15) = 40[T_m - 298.15]$	(5)	15
$(C_{p_c} - C_{p_g})(T_m - 298.15) = 60[T_m - 298.15]$	(6)	16
$(C_{p_c} - C_{p_g})(T_m - 298.15) = [0.75 + 0.15C_{p_c}(298.15 \text{ K})][T_m - 2.98]$	(7)	17

the total temperature adjustment has been arbitrarily chosen as the uncertainty ( $\pm 2 \sigma$ ).<sup>9</sup>

Equations (3)–(6) do not require  $C_{p_c}$  values; their use can be an advantage if an appropriate group value or experimental heat capacity is unavailable for a particular substance. Temperature adjustments to 298.15 K are often small and frequently of the same order of magnitude as the uncertainty associated with the measurement. This is the rationale some authors give for not adjusting the measurements for temperature. It should be emphasized that the magnitude of the sublimation enthalpy will increase with decreasing temperature and even though the temperature adjustment may be small, failure to adjust for temperature incorporates a systematic error that can easily be minimized by using of one of the equations in Table 1.

The sublimation enthalpies reported in this paper, have not been adjusted to 298.15 K unless done so by the reporting authors. Different authors have used different methods. In some cases experimental data have been used for  $C_{p_c}$  and only  $C_p$  has been estimated. The reader is encouraged to refer to the original literature for details. In an effort to provide some assistance to the reader in this regard, a brief discussion of one of the few group additivity methods that are available for estimating the heat capacity of solids is included below.<sup>12,19</sup> This is followed by an illustration of how this value can be used in conjunction with Eq. (7) to provide temperature adjustments.

### 3. Group Additivity Values for $C_{p_c}$ (298.15 K) Estimations

Table 2 parts (A) and (B) lists a set of group values that can be used in estimations of  $C_{p_c}$  (298.15 K). The groups and their corresponding values are identified by the italics. A hypothetical molecule is given in Fig. 2 that identifies each hydrocarbon group. The functional groups are self-explanatory. The R terms in Table 2 represent unidentified groups and are not included in the value. The use of these group values is illustrated with examples of  $C_{p_c}$  (298.15 K) estimations in Table 3. Values in brackets should be considered as tentative assignments. Further details are available in the literature.<sup>19</sup>

### 4. Reference Materials for Sublimation Enthalpy Measurements

Calibration is a fundamental requirement for every sublimation enthalpy measurement. Unlike other thermochemical measurements, uncertainties in sublimation enthalpies can be large, often several  $\text{kJ mol}^{-1}$  or more, particularly for com-

pounds exhibiting low vapor pressures. While some of the observed differences in reported enthalpies may be due to polymorphism, others are probably due to the lack of a sufficient number of reference compounds that vary in their range of volatility. The ability of an experimental technique to measure vapor pressure in one pressure or temperature region does not in itself guarantee the same accuracy in another. Substantial variations in sublimation values are revealed in the tables that follow. This variance clearly establishes the importance of documenting the accuracy of the measurements through the use of appropriate reference materials that approximate the temperature and pressure regimes of the measurements.

A series of compounds have recently been proposed as reference materials.<sup>9</sup> These have been classified as primary, secondary, or tertiary reference materials, on the basis of various criteria. The materials classified as primary and secondary reference materials are listed in Table 4. The temperature range, the corresponding vapor pressures, and the recommended values are also included in the table.

### 5. Sublimation Enthalpy Compendium

The sublimation enthalpies, reported during the time period 1910–2001, are included in Tables 6 and 7. Table 5 contains a listing of the acronyms that are used in these two tables. Table 6 contains sublimation enthalpy data for organic compounds and Table 7 contains data for organometallic and a few inorganic compounds. Information in Table 6 is organized as shown below. Compounds are arranged according to molecular formula. The name of the compound, occasionally a synonym, and the CAS registry number are included on the first line. If the information was available, the first entry on the second line contains information regarding the polymorphic form studied. However, in most cases this information was not available. The range of temperatures studied is the next entry in the table. For measurements performed at a constant temperature or when not specified, this entry is left blank. The sublimation enthalpy at the mean temperature of measurement  $\Delta_{\text{sub}}H_m(T_m)$  is the next entry followed by the mean temperature (K), an acronym briefly describing the type of measurement, and the reference to the original work. In some cases the type of measurement was not available, or recorded. In these instances this entry was left blank. If the authors of the work have adjusted their results to 298.15 K, then this information along with the reference is entered on the third line. This information is repeated for multiple measurements. The measurements are arranged in reverse chronological order. A similar format is followed in Table 7 with the major exception that each organometallic compound is arranged alphabetically by element and then according to the Hill system.

TABLE 2. Group values for estimating the  $C_{p_c}$ (298.15 K)

(A) Group values for estimating the $C_{p_c}$ (298.15 K) of hydrocarbons. <sup>a</sup>					
Hydrocarbon Groups					
Aliphatic groups			Cyclic aliphatic and olefinic groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
primary $sp^3$ C	$-\text{CH}_3$	36.6	cyclic secondary $sp^3$ C	$-\text{C}_c\text{H}_2-$	24.6
secondary $sp^3$ C	$-\text{CH}_2-$	26.9	cyclic tertiary $sp^3$ C	$-\text{C}_c\text{HR}-$	11.7
tertiary $sp^3$ C	$-\text{CHR}-$	9	cyclic quaternary $sp^3$ C	$-\text{C}_c\text{R}_2-$	6.1
quaternary $sp^3$ C	$-\text{CR}_3$	-5	cyclic tertiary $sp^2$ C	$-\text{C}_c\text{HR}-$	15.9
			cyclic quaternary $sp^2$ C	$-\text{C}_c\text{R}_2-$	[4.7]
Olefinic and Acetylenic Groups			Aromatic Groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
secondary $sp^2$ C	$=\text{CH}_2$	46	tertiary aromatic $sp^2$ C	$=\text{C}_a\text{H}-$	17.5
tertiary $sp^2$ C	$=\text{CH}-$	21.4	quaternary aromatic $sp^2$ C	$=\text{C}_a\text{R}-$	8.5
quaternary $sp^2$ C	$=\text{C}-$	6.9	internal quaternary aromatic C	$=\text{C}_a\text{R}-$	[9.1]
tertiary $sp$ C	$\equiv\text{C}-\text{H}$	37.1			
quaternary $sp$ C	$\equiv\text{C}-$	15.5			
(B) Group values for estimating the $C_{p_c}$ (298.15 K) contribution of various functional groups.					
Monodentate functional groups			Tridentate functional groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
Alcohols, phenols	$-\text{OH}$	23.5	tertiary $sp^3$ N	$-\text{NR}_2$	[31.5]
Fluorine	$-\text{F}$	[24.8]	tertiary $sp^2$ N	$\equiv\text{N}-$	
Chlorine	$-\text{Cl}$	28.7	cyclic tertiary $sp^2$ N	$\equiv\text{N}_c-$	13.9
Bromine	$-\text{Br}$	32.4	cyclic tertiary $sp^3$ N	$-\text{N}_c\text{R}-$	1.2
Iodines	$-\text{I}$	[27.9]	cyclic tertiary amide	$-\text{CONR}-$	52.7
Nitrile	$-\text{CN}$	42.3	cyclic imide	$-\text{CONHCO}-$	74.1
Carboxylic acid	$-\text{CO}_2\text{H}$	53.1	phosphine oxide	$-(\text{PO})\text{R}-$	28.5
Acid chloride	$-\text{COCl}$	[60.2]			
Aldehyde	$-(\text{C}=\text{O})\text{H}$	[84.5]			
Isocyanate	$-\text{NCO}$	[52.7]			
Nitro group	$-\text{NO}_2$	56.1			
Secondary $sp^3$	$-\text{NH}_2$	21.6			
Nitrogen					
Primary amides	$-\text{CONH}_2$	54.4			
Thiols	$-\text{SH}$	[51.9]			
Sulfonamide	$-\text{SO}_2\text{NH}_2$	104			
Substituted urea	$-\text{NHCONH}_2$	82.8			
Bidentate functional groups			Tetradentate function groups		
Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{mol}^{-1}$
Ketones	$-\text{CO}-$	28	quaternary silicon	$-\text{SiR}_2-$	32.4
Cyclic ketones	$-(\text{CO})_c-$	34.3	quaternary tin	$-\text{SnR}_2-$	77.2
Ester	$-\text{CO}_2\text{R}$	40.3	quaternary germanium	Ge	18.9
Lactones	$-\text{CO}_2-$	45.2			
Cyclic carbonates	$-\text{OCO}_2-$	[68.2]			
Cyclic anhydrides	$-\text{CO}_2\text{CO}-$	80.3			
Ether	$-\text{O}-$	49.8			
Cyclic ether	$-\text{Oc}-$	9.7			
Secondary $sp^3$ N	$-\text{NH}-$	-0.3			
Cyclic secondary $sp^3$ N	$-\text{N}_c\text{H}-$	23.9			
Tertiary $sp^2$ N	$\equiv\text{NH}$	10.7			
Secondary amide	$-\text{CONH}-$	44.4			

TABLE 2. Group values for estimating the  $C_p$ (298.15 K)—Continued

Bidentate functional groups			Tetradentate function groups		
Description of group	Formula	$\text{J K}^{-1} \text{ mol}^{-1}$	Description of group	Formula	$\text{J K}^{-1} \text{ mol}^{-1}$
Cyclic secondary amide	$-\text{CONH}-$	46.4			
Tertiary $sp^3$ N	$-\text{NR}_2$	31.5			
Cyclic urea	$-\text{NHCONH}-$	63.6			
Carbamates	$-\text{OCONH}-$	76.1			
Sulfides	$-\text{S}-$	116			
Cyclic sulfides	$-\text{S}_c-$	20.3			
Disulfides	$-\text{S}-\text{S}-$	41			
Sulfoxides	$-\text{SO}-$	47.7			
Sulfones	$-\text{SO}_2-$	88.7			

<sup>a</sup>See Ref. 19.

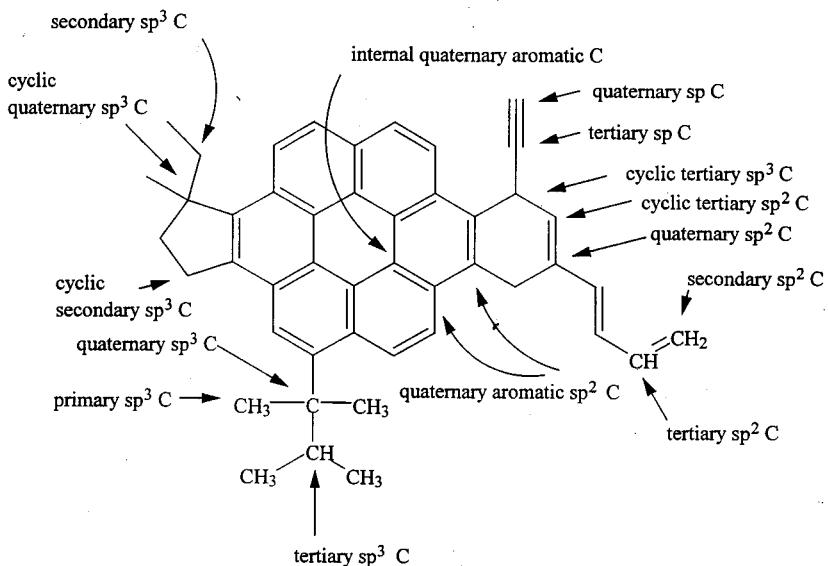
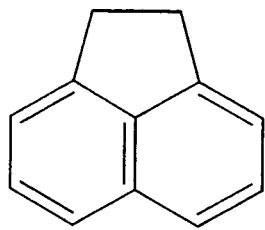


FIG. 2. A hypothetical molecule illustrating the different hydrocarbon groups in estimating  $C_p$ .

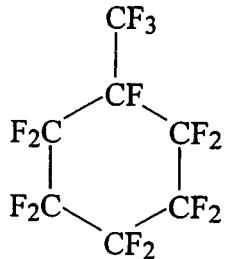
The authors have made an effort to present the data accurately and without error. However some of the information has been obtained from non-English journals with translations occasionally provided by the author's students. These tables have been complied over a period of 25 years and

have gone through numerous revisions. Some errors have been corrected; however it is unlikely that all the errors have been detected and corrected. The reader is encouraged to consult the original literature when using this compendium.

TABLE 3. Some estimations of  $C_{p_c}(298.15 \text{ K})$  using the group values of Tables 2(A) and 2(B)

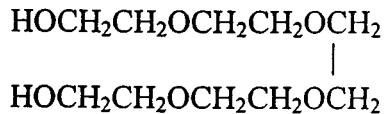
$$\begin{aligned} C_{p_c}(298.15 \text{ K}) &= 6*17.5 + 4*8.5 + 2*24.6 \\ &= 188 \text{ J mol}^{-1} \text{ K}^{-1} \\ &\quad (190.4 \text{ J mol}^{-1} \text{ K}^{-1})^* \end{aligned}$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) + [0.75 + (0.15*197)][T_m - 298.15]$$



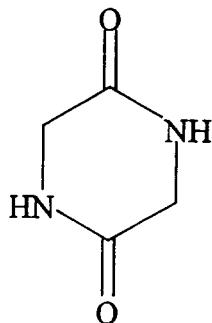
$$\begin{aligned} C_{p_c}(298.15 \text{ K}) &= 6*6.1 - 5.0 + 14*24.8 \\ &= 378.8 \text{ J mol}^{-1} \text{ K}^{-1} \\ &\quad (353.1 \text{ J mol}^{-1} \text{ K}^{-1})^* \end{aligned}$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) + [0.75 + (0.15*379)][T_m - 298.15]$$



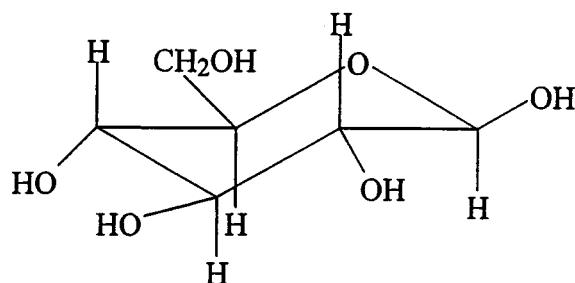
$$\begin{aligned} C_{p_c}(298.15 \text{ K}) &= 10*26.9 + 2*23.5 + 5*49.8 \\ &= 515 \text{ J mol}^{-1} \text{ K}^{-1} \\ &\quad (515.5 \text{ J mol}^{-1} \text{ K}^{-1})^* \end{aligned}$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) + [0.75 + (0.15*515)][T_m - 298.15]$$



$$\begin{aligned} C_{p_c}(298.15 \text{ K}) &= 2*24.6 + 2*46.4 \\ &= 142 \text{ J mol}^{-1} \text{ K}^{-1} \\ &\quad (134 \text{ J mol}^{-1} \text{ K}^{-1})^* \end{aligned}$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) + [0.75 + (0.15*142)][T_m - 298.15]$$

 $\text{Ph}_3\text{SiCl}$ 

$$\begin{aligned} C_{p_c}(298.15 \text{ K}) &= 5*11.7 + 9.7 + 26.9 + 5*23.5 \\ &= 212.6 \text{ J mol}^{-1} \text{ K}^{-1} \\ &\quad (219.2 \text{ J mol}^{-1} \text{ K}^{-1})^* \end{aligned}$$

$$\Delta_{\text{sub}}H_m(298.15 \text{ K}) = \Delta_{\text{sub}}H_m(T_m) + [0.75 + (0.15*213)][T_m - 298.15]$$

$$\begin{aligned} C_{p_c}(298.15 \text{ K}) &= 15*17.5 + 3*8.5 + 32.4 + 28.7 \\ &= 349.1 \text{ J mol}^{-1} \text{ K}^{-1} \\ &\quad (337.6 \text{ J mol}^{-1} \text{ K}^{-1})^* \end{aligned}$$

\*Domalski and Hearing.<sup>10</sup>

TABLE 4. Recommended reference standards for sublimation enthalpy measurements<sup>a</sup>

Formula	Substance	Temperature range (K)	Vapor pressure (Pa)	$\Delta_{\text{sub}}H_m(298.15 \text{ K})$ (kJ mol <sup>-1</sup> )	Classification
C <sub>7</sub> H <sub>6</sub> O <sub>2</sub>	Benzoic acid	298–383	0.1–360	(89 700±1000)	Primary
C <sub>10</sub> H <sub>8</sub>	Naphthalene	250–353	0.1–995	(72 600±600)	Primary
C <sub>10</sub> H <sub>10</sub> Fe	Ferrocene	277–360	0.1–166	(73 420±1080)	Primary
C <sub>14</sub> H <sub>10</sub>	Authracene	338–360	0.1–1.0	(103 360±2670)	Secondary
C <sub>16</sub> H <sub>10</sub>	Pyrene	350–420	0.2–50	(100 200±3590)	Secondary
I <sub>2</sub>	Iodine	273–387	4–12 600	(62 440±82)	Secondary

<sup>a</sup>See Ref. 9.

TABLE 5. A list of acronyms used in Tables 6 and 7

A	calculated from the vapor pressure data reported by the method of least squares
B	calculated from the sum of the enthalpy of vaporization at temperature T and the enthalpy of fusion at the melting point
BE	experimental value closest to the results obtained by adding the experimental fusion and vaporization enthalpies
BG	Bourdon gauge
C	calorimetric determination
CATH	cathetometer
GC	gas chromatography
CGC-DSC	combined correlation gas chromatography-differential scanning calorimetry
DBM	dibutyl phthalate manometer
DM	diaphragm manometer
DSC	differential scanning calorimeter
E	estimated
EB	ebulliometer
EM	effusion manometer
EV	evaporation
GS	gas saturation, transpiration
GSM	glass spring manometer
HSA	head space analysis
I	isotenoscope
IPM	inclined piston manometry
KG	Knudsen gauge
LE	Langmuir evaporation
MCV	method of calibrated volume
ME	Mass effusion-Knudsen effusion
MEM	modified entrainment method
MG	McLeod gauge
MM	mercury manometer
MS	mass spectrometry
NA	not available at the time of publication
OM	oil manometer
PG	Penning gauge
QF	quartz fiber
QR	quartz resonator
RG	Rodebush gauge
SG	spoon gauge
SMZG	silica membrane zero gauge
T	tensimeter
TC	thermal conductivity manometer
TB	thermobalance
TE	torsion effusion
TGA	thermal gravimetric analysis
TPTD	temperature programmed thermal desorption particle beam mass spectrometry
TRM	thermoradiometric method
TSGC	temperature scanning gas chromatography
U	unreliable
UV	ultraviolet absorption
V	viscosity gauge
VG	MKS baratron vacuum gauge

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
CBrN	cyanogen bromide				[506-68-3]
	(273–308)	45.2±4.2		MM	[54/7][70/1]
	(256–308)	47		GS	[20/1]
CBr <sub>4</sub>	carbon tetrabromide				[558-13-4]
(monoclinic)		54.5±0.7	(298)	C	[84/3]
(monoclinic)	(295–319)	54.4±1.3	(307)	BG	[59/5]
(cubic)	(321–329)	49.4±1.3	(325)	BG	[59/5]
(cubic)		48.3	(320)		[55/8]
	(277–363)	51.9	(320)		[41/4]
CClN	cyanogen chloride				[506-77-4]
	(196–259)	35.7	(228)	A	[47/2]
CCl <sub>4</sub>	carbon tetrachloride				[56-23-5]
		43.3	(226)	B	[63/6]
	(209–225)	38.8	(217)		[60/1][48/1]
	(227–248)	37.9			[48/1]
CFN	cyanogen fluoride				[1495-50-7]
	(147–191)	28.9	(176)		[87/4][64/17]
	(139–192)	24.4	(166)	A	[47/2]
	(133–203)	29.3	(168)		[31/1]
CF <sub>2</sub> N <sub>2</sub>	difluorocyanamide				[7127-18-6]
	(179–198)	20.6 (liq)	(189)		[87/4][66/10]
CF <sub>2</sub> O	carbonyl fluoride				[353-50-4]
	(130–159)	23.2	(145)		[87/4][68/3]
CF <sub>4</sub>	tetrafluoromethane				[75-73-0]
[α]	(76–90)	14.7	(83)		[87/4][70/25]
[β]	(70–76)	16.8	(73)		[87/4][70/25]
	(86–89)	14.7	(88)		[67/19]
		17.0	(76)		[63/6]
	(80–86)	14.0	(83)	A	[33/5]
CF <sub>5</sub> N	pentafluoromethyl amine				[335-01-3]
	(128–141)	18.6	(135)		[87/4][51/18]
CIN	cyanogen iodide				[506-78-5]
	(337–426)	59.9	(352)	GSM	[87/4][43/2]
	(298–414)	58.6	(356)	A	[47/2]
	(337–426)	59.8±0.4		GSM	[43/2][70/1]
	(278–374)	58.3	(326)		[33/2]
CN <sub>4</sub> O <sub>8</sub>	tetrinitromethane				[509-14-8]
	(255–286)	47.4	(271)		[87/4][41/6]
CO	carbon monoxide				[630-08-0]
	(54–61)	7.6	(58)		[87/4]
	(51–68)	8.1	(60)	A	[47/2]
	(57–68)	7.9	(62)	A	[31/3]
CO <sub>2</sub>	carbon dioxide				[124-38-9]
	(198–216)	26.1	(207)		[87/4]
	(70–102)	27.2±0.4		LE	[74/13]
	(139–195)	26.3	(167)	A	[47/2]
	(154–196)	26.2	(173)	A	[37/5]
CHF <sub>3</sub>	trifluoromethane				[75-46-7]
	(89–118)	25.6	(103)		[87/4]
CHI <sub>3</sub>	iodoform				[75-47-8]
	(308–365)	69.9	(323)		[43/1]
CHN	hydrogen cyanide				[74-90-8]
	(244–258)	35.6	(251)	MM	[87/4][26/4]
	(202–254)	37.6	(228)	A	[47/2]
CHN <sub>3</sub> O <sub>6</sub>	trinitromethane				[517-25-9]
		45.2±2.1	(298)		[99/35]
		54.8±4.2			[70/7]
		46.7±0.4			[67/4][70/1]
					[77/1]
CH <sub>2</sub> N <sub>2</sub>	cyanamide				[420-04-2]
	(227–289)	75.9	(290)	TE,ME	[83/7]
		75.2	(298)		[83/7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{CH}_2\text{N}_4$	tetrazole	88.16	(353)	C	[288-94-8]
		$87.8 \pm 1.4$	(369)	ME	[93/8]
		88.0 ± 1.6		ME	[93/8]
		97.5 ± 4.2	(348)	ME	[90/31]
$\text{CH}_2\text{O}_2$	formic acid	97.5 ± 4.2	(348)	ME	[51/3][70/1]
		60.5	(275)		[64-18-6]
		62.1 ± 1	(213)	TE,ME	[87/4]
		60.7	(266)		[78/16]
$(\text{CH}_2\text{O}_2)_2$	formic acid dimer	60.1	(264)	A	[30/1][60/1]
		64.1 ± 1	(213)	TE,ME	[47/2]
		64.1 ± 1	(213)	TE,ME	[14523-98-9]
		64.1 ± 1	(213)	TE,ME	[78/16]
$\text{CH}_3\text{Cl}$	methyl chloride	31.6 ± 0.1	(151)		[74-87-3]
		28.0		B	[95/23]
$\text{CH}_3\text{Cl}_2\text{OP}$	methylphosphonic dichloride	62.3			[40/3]
		62.3			[676-97-1]
$\text{CH}_3\text{I}$	methyl iodide	40.2 ± 0.4	(191)	VG	[74-88-4]
		U 69.9			[82/6]
$\text{CH}_3\text{NO}$	formamide	72.4	(264)	TE,ME	[43/1][60/1]
		71.7	(298)		[75-12-7]
		71.7	(276)		[83/7]
$\text{CH}_3\text{N}_5$	5-aminotetrazole	112.6 ± 1.2		ME	[83/7]
		112.6 ± 1.2			[90/31]
$\text{CH}_4$	methane	9.7	(72)		[74-82-8]
		9.2	(72)		[87/4]
		10.0	(84)		[63/6][55/2]
		9.7	(63)	A,MS	[60/1]
		9.62	(77)	A	[51/15]
$\text{CH}_4\text{N}_2\text{O}$	urea	90.9	(381)		[47/2]
		96.9	(351)	TE,ME	[57-13-6]
		98.6	(298)		[87/5]
		95.4	(361)		[83/7]
		87.9 ± 2.1	(356)		[78/19]
		88.2	(357)		[56/6][60/1]
$\text{CH}_4\text{N}_2\text{S}$	thiourea	112.0 ± 2	(298)	ME	[70/1][87/4]
		109 ± 2.0	(408)	TE	[62-56-5]
		111 ± 3.0	(298)		[94/20]
		106.6	(384)	TE,ME	[94/20]
		107.6	(298)		[83/7]
		112 ± 1.5	(298)	C	[83/7]
		93.7 ± 10			[82/8]
$\text{CH}_4\text{N}_4\text{O}_2$	nitroguanidine	142.7 ± 2.0	(298)	ME	[70/11]
		142.7 ± 2.0	(298)	ME	[556-88-7]
$\text{CH}_5\text{NO}$	N-methylhydroxylamine	56.6	(288)	I	[78/15]
		56.6	(288)	I	[593-77-1]
$\text{CH}_5\text{N}_3\text{O}$	1-methyl-1-nitrosohydrazine	79.5 ± 0.4	(298)		[87/4][57/11]
		79.5 ± 0.4	(298)		[758-19-0]
$\text{CH}_5\text{N}_3\text{S}$	thiosemicarbazide	125.8 ± 1.5	(298)	C	[98/36]
		125.8 ± 1.5	(298)	C	[79-19-6]
$\text{CH}_5\text{O}_3\text{P}$	methylphosphonic acid	48.1 ± 4.2			[82/8]
		48.1 ± 4.2			[993-13-5]
$\text{CH}_6\text{N}_4\text{S}$	thiocarbohydrazide	152.1 ± 3.0	(298)	C	[55/4][70/1]
		152.1 ± 3.0	(298)	C	[2231-57-4]
$\text{C}_2\text{BrCl}_5$	bromopentachloroethane	44.4	(398)		[82/8]
		44.4	(398)		[79504-02-2]
$\text{C}_2\text{Br}_2\text{Cl}_4$	1,2-dibromotetrachloroethane				[87/4][49/11]
					[630-25-1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )		CAS registry number
Polymorph	Temperature range (K)			Method	Reference
$\text{C}_2\text{Br}_4$	(383–453)	52.5	(398)		[87/4][49/11]
	(323–423)	56.7	(373)	A	[35/4] [79-28-7]
$\text{C}_2\text{Cl}_3\text{F}_3$	tetrabromoethylene				
	(221–310)	44.2	(236)		[87/4] [76-13-1]
$\text{C}_2\text{Cl}_4\text{F}_2$	1,1,2-trichloro-1,2,2-trifluoroethane				
	(205–233)	32.9	(219)	A	[47/2] [76-12-0]
$\text{C}_2\text{Cl}_6$	1,1,2,2-tetrachloro-1,2-difluoroethane				
	(235–293)	36.4	(278)		[87/4][47/2]
$\text{C}_2\text{Cl}_6$	(237–293)	38.2	(265)	A	[47/2] [67-72-1]
	hexachloroethane				
(melting point 186.6)	(317–345)	58.9	(331)		[87/4]
	(306–459)	48.8	(382)	A	[47/2]
triclinic form	(286–447)	$59.1 \pm 0.7$	(367)		[47/3][60/1] [70/1][41/1]
cubic form	(286–447)	51	(367)		[47/3][60/1] [41/1]
$\text{C}_2\text{F}_2\text{O}_2$	(335–453)	50.5			[35/3]
	(288–333)	59.0	(310)	GS,A	[30/6] [359-40-0]
$\text{C}_2\text{F}_6$	oxalyl fluoride				
	(234–260)	16.7	(247)		[87/4] [76-16-4]
$\text{C}_2\text{N}_2$	hexafluoroethane				
	cyanogen	26	(103)		[63/6][48/4] [460-19-5]
	(202–239)	33	(224)		[87/4]
	(177–230)	33.6	(204)	A	[47/2]
	(202–245)	34.4	(223)	MM	[39/2]
	(198–240)	32.4	(224)		[25/2][75/10] [16/1]
$\text{C}_2\text{N}_6\text{O}_{12}$	hexanitroethane				[918-37-6]
		70.7	(298)		[99/35]
	(293–343)	30.4	(308)		[87/4][63/10]
	(293–313)	$70.7 \pm 1.7$	(303)	ME	[69/10][77/1] [68/5]
$\text{C}_2\text{H}_2$	acetylene				[74-86-2]
	(98–145)	23.5	(130)		[87/4]
		21.9	(298)	H	
	(133–191)	21.8	(162)		[60/1]
		20.2	(298)	H	
	(151–193)	25.2	(193)		[56/18]
$\text{C}_2\text{H}_2\text{F}_3\text{NO}$	(130–189)	22.7	(160)	A	[47/2]
		21.1	(298)	H	
	(89–169)	22.1	(129)	A	[43/4] [354-38-1]
	trifluoroacetamide				
	(288–329)	81	(302)	I	[87/4][78/6]
$\text{C}_2\text{H}_2\text{I}_2$	(288–329)	$77.7 \pm 1.4$	(298)	I	[78/6]
	<i>trans</i> -diiodoethylene				[590-27-2]
	(253–265)	40.7	(258)	ME	[33/1][60/1] [87/4]
	oxalic acid (anhydrous)				[144-62-7]
$\alpha$	(303–328)	93.4	(316)		[87/4]
	(310–325)	93.3	(318)		[87/4]
$\beta$		98.5			[83/23]
		92.5			[83/23]
$\alpha$ (orthorhombic)	(303–328)	$93.7 \pm 1.3$	(298)	TE	[75/5]
	(311–325)	$97.9 \pm 2.2$	(318)		[53/4][60/1]
(monoclinic)	(311–323)	93.3	(317)		[53/4][60/1]
	(292–320)	61.8	(306)	A	[47/6]
$\text{C}_2\text{H}_3\text{ClO}_2$	(333–378)	90.6		GS	[26/3]
	chloroacetic acid				[79-11-8] [28/1][49/4]
$\text{C}_2\text{H}_3\text{Cl}_3\text{O}_2$		$75.3 \pm 4.2$			[70/1]
	trichloroacetaldehyde hydrate				[302-17-0]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_2\text{H}_3\text{FN}_2\text{O}_5$	(263–319)	50.9	(291)	A	[47/2]
	2-fluoro-2,2-dinitroethanol	55.6±2.1			[17003-75-7] [77/1][68/7]
$\text{C}_2\text{H}_3\text{NO}_3$	oxalic acid, monoamide	108.9±2.1	(298)	ME	[471-47-6] [88/18]
	(355–363)	107.9	(359)	ME	[53/1][60/1] [87/4]
$\text{C}_2\text{H}_3\text{NS}$	methyl isothiocyanate				[556-61-6]
	(238–293)	31.5	(266)	A	[47/2]
$\text{C}_2\text{H}_3\text{N}_3$	1,2,4-triazole	80.7±0.5	(298)	C	[99/8]
	(281–296)	84.1	(288)	ME	[89/8]
$\text{C}_2\text{H}_3\text{N}_3$	(281–296)	84.0±0.7	(298)	ME	[89/8]
		80.6±0.5			[85/6]
$\text{C}_2\text{H}_3\text{N}_3\text{O}_6$		84.1		ME	[61/3]
	1,1,1-trinitroethane	72.0±8.8	(298)		[595-86-8] [99/35]
$\text{C}_2\text{H}_4$	ethylene				[74-85-1]
	(79–104)	18.4	(91.5)	A,MS	[87/4][51/15]
		15.3	(298)	H	
	(237–289)	44.5 (liq)	(274)		[87/4]
		44.2	(298)	H	
	(77–103)	15.0			[82/19]
	(237–283)	44.3 (liq)	(260)	A	[47/2]
		43.7	(298)	H	
$\text{C}_2\text{H}_4\text{Br}_2$	1,2-dibromoethane				[106-93-4]
	(229–248)	54.8	(239)		[48/1]
	(251–281)	49.8	(258)	A	[48/1][47/2] [87/4]
$\text{C}_2\text{H}_4\text{I}_2$	1,2-diidoethane	65.7±4.1			[624-73-7] [54/6][70/1]
$\text{C}_2\text{H}_4\text{N}_2\text{O}_2$	diformylhydrazine				[628-36-4]
	(340–373)	205.1±0.7	(356)	ME	[80/11]
$\text{C}_2\text{H}_4\text{N}_2\text{O}_2$	(370–403)	100.8			[56/6][60/1]
	oxamide	117.3±1.2	(298)	TE,ME	[471-46-5] [88/18]
	(370–398)	115.8	(387)	TE,ME	[83/7]
	(353–369)	113.0	(361)	ME	[53/1] [60/1][70/1]
$\text{C}_2\text{H}_4\text{N}_2\text{S}_2$	dithiooxamide	103.8	(298)	TE,ME	[79-40-3] [88/18]
	(345–372)	105.1	(361)	TE,ME	[83/7]
	(360–378)	105.4	(369)	ME	[53/1][60/1] [87/4]
$\text{C}_2\text{H}_4\text{N}_4$	dicyandiamide				[461-58-5]
	(420–450)	128.7	(436)	TE,ME	[83/7]
$\text{C}_2\text{H}_4\text{N}_4$	1-methyltetrazole				[16681-77-9]
	(282–311)	86.7±1.9		ME	[90/31]
$\text{C}_2\text{H}_4\text{N}_4$	5-methyltetrazole				[4076-36-2]
	(323–418)	93.8±0.5		ME	[90/31]
$\text{C}_2\text{H}_4\text{O}_2$	acetic acid				[64-19-7]
	(243–289)	54.5 (liq)	(274)		[87/4]
	(213–230)	67.3±1	(223)	TE,ME	[78/16]
	(213–230)	70±1	(213)	TE,ME	[78/16]
$(\text{C}_2\text{H}_4\text{O}_2)_2$	acetic acid dimer				
	(213–230)	70.2±1	(213)	TE	[78/16]
	(213–230)	68.9±1	(213)	ME	[78/16]
$\text{C}_2\text{H}_4\text{O}_3$	methyl hydrogen carbonate	18.2±1.6	(220)		[7456-87-3] [73/9]
$\text{C}_2\text{H}_5\text{NO}$	acetamide	78.5±0.3			[60-35-5] [98/38]
	(273–293)	77.8	(284)	TE,ME	[83/7]
		77.2	(298)		[83/7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		78.7±0.3			[75/18][77/1]
		80.3±1	(298)		[71/16]
		80.3±1.3	(298)	C	[65/8]
	(298–349)	77.4±0.4	(323)	GS	[59/3][87/4]
	(293–306)	U57.2	(300)		[52/4]
C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub>	methyl carbamate				[598-55-0]
	(287–305)	74.5±0.8	(296)	GS	[59/4]
C <sub>2</sub> H <sub>5</sub> NO <sub>2</sub>	glycine				[56-40-6]
	(408–431)	136.5±2	(419)	TE,ME	[79/1]
	(325–425)	U 96.2±4	(375)	LE	[77/2]
	(413–450)	138.1±4.6	(298)	C	[77/3]
	(453–471)	136.4±4.0	(462)	ME	[65/1][70/1]
					[64/16]
	(412–417)	130.5±2	(414)	ME	[59/1]
C <sub>2</sub> H <sub>5</sub> NS	thioacetamide				[62-55-5]
		83.3±0.3	(298)	C	[82/7][85/5]
		82.8±0.3	(298)	C	[82/17]
C <sub>2</sub> H <sub>5</sub> N <sub>5</sub>	1-methyl-5-aminotetrazole				[5422-44-6]
	(379–438)	116.4±1.7		ME	[90/31]
C <sub>2</sub> H <sub>5</sub> N <sub>5</sub>	2-methyl-5-aminotetrazole				[6154-04-7]
	(310–373)	90.6±1.1		ME	[90/31]
C <sub>2</sub> H <sub>6</sub>	ethane				[74-84-0]
	(80–90)	22.6	(85)		[72/26]
		20.5	(90)	B	[63/6]
C <sub>2</sub> H <sub>6</sub> N <sub>2</sub> O	N-methylurea				[598-50-5]
		94.4±0.84	(343)	C	[93/17]
		97.1±0.4	(298)		[93/17]
		94.9±0.6	(337)	C	[90/25]
		93.3±1.2	(355)	TE	[90/5][87/5]
		87.3	(348)		[87/5]
		99.3±0.7			[86/6]
		78.2		E	[82/13]
C <sub>2</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	N-methyl-N-nitromethanamine				[4164-28-7]
	(315–324)	69.9	(319)	DBM	[52/2][77/1]
C <sub>2</sub> H <sub>6</sub> N <sub>2</sub> S	N-methylthiourea				[598-52-7]
		112.9±3	(298)	ME	[00/23]
		111±3.0	(381)	TE	[94/20]
C <sub>2</sub> H <sub>6</sub> O <sub>2</sub> S	dimethyl sulfone				[67-71-0]
		77.0±2.9			[70/1][U/3]
C <sub>2</sub> H <sub>6</sub> O <sub>4</sub>	bis-hydroxymethyl peroxide				[17088-73-2]
		94.1±4.2		ME	[53/3][70/1]
C <sub>2</sub> H <sub>8</sub> N <sub>2</sub>	ethylenediamine				[107-15-3]
	(242–278)	65.6	(263)	IPM	[87/4][75/32]
C <sub>2</sub> H <sub>8</sub> N <sub>6</sub> O <sub>2</sub>	1,1'-(1,2-ethanediyl)bis(1-nitrosohydrazine)				[216489-95-1]
		172.4±1.3	(298)		[98/36]
C <sub>3</sub> HN	cyanoacetylene				[1070-71-9]
	(247–279)	42.3	(264)		[87/4]
C <sub>3</sub> H <sub>2</sub> N <sub>2</sub>	malononitrile				[109-77-3]
	(278–299)	78.2±1.0	(298)		[90/18]
		79.1±8		ME	[67/3][70/1]
C <sub>3</sub> H <sub>2</sub> OS <sub>2</sub>	1,3-dithiol-2-one				[2314-40-1]
		73.6±0.8	(298)		[73/16][77/1]
C <sub>3</sub> H <sub>2</sub> OS <sub>3</sub>	1,3-dithiole-2-thione				[930-35-8]
		75.4±0.4	(298)		[73/16][77/1]
C <sub>3</sub> H <sub>3</sub> N <sub>3</sub>	1,3,5-triazine				[290-87-9]
	(212–229)	58.2	(222)	TE,ME	[83/7]
		54.2±0.2	(298)		[82/16]
	(283–313)	56.5±2.1			[82/9]
CH <sub>2</sub> N <sub>4</sub>	tetrazole				[288-94-8]
	(242–264)	U 43.1	(253)	ME	[68/8]
C <sub>3</sub> H <sub>3</sub> N <sub>3</sub> O <sub>2</sub>	6-azauracil				[461-89-2]
		141		LE	[74/8]
C <sub>3</sub> H <sub>3</sub> N <sub>3</sub> O <sub>3</sub>	cyanuric acid				[108-80-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_3\text{H}_3\text{N}_5\text{O}_{10}$	(440–473)	131	(458)	ME,TE	[83/7]
		133	(298)		[83/7]
$\text{C}_3\text{H}_4\text{N}_2$	1,1,1,2,2-pentanitropropane	$77.4 \pm 1.3$	(298)		[62626-83-9]
	imidazole	$83.1 \pm 0.2$	(300)	ME	[99/35]
	(292–309)	$83.1 \pm 0.2$	(298)	ME	[288-32-4]
		80.8	(301)	ME,TE	[87/9]
$\text{C}_3\text{H}_4\text{N}_2$	(288–310)	$74.5 \pm 0.4$	(298)	C	[86/15]
		85.3	(298)		[83/7]
$\text{C}_3\text{H}_4\text{N}_2$	pyrazole	$74.3 \pm 0.4$	(275)	ME	[80/5]
	(268–287)	$74.0 \pm 0.4$	(298)		[61/3]
		72.7	(265)	TE,ME	[87/9][86/15]
	(253–273)	$69.2 \pm 3$	(298)	C	[83/7]
$\text{C}_3\text{H}_4\text{N}_2\text{O}$		71.8			[80/5]
		67.7			[79/11]
$\text{C}_3\text{H}_4\text{N}_2\text{O}$	2-cyanoacetamide				[61/3]
	(325–348)	99.7	(336)	TE,ME	[107-91-5]
$\text{C}_3\text{H}_4\text{N}_2\text{O}_4$	3-nitro-2-isoxazoline-2-oxide				[83/7]
		$71.1 \pm 8.4$			[4122-45-6]
$\text{C}_3\text{H}_4\text{OS}_2$	1,3-dithiolan-2-one				[77/1][69/10]
		$80.3 \pm 0.4$			[2080-58-2]
$\text{C}_3\text{H}_4\text{O}_2\text{S}$	thiete sulfone (2H-thiete-1,1-dioxide)				[73/16][77/1]
		$83.7 \pm 2.5$		B	[7285-32-7]
$\text{C}_3\text{H}_4\text{O}_3$	ethylene carbonate				[69/11][77/1]
	(273–297)	$78.5 \pm 4.2$	(285)	ME	[96-49-1]
$\text{C}_3\text{H}_4\text{O}_4$		73.2±2.5			[87/4][71/12]
	malonic acid				[77/1]
	(339–357)	$108.9 \pm 0.7$	(348)	ME	[141-82-2]
		$111.4 \pm 0.7$	(298)		[99/10]
		72.7	(306)	A	[99/10]
		$105.1 \pm 0.8$		C	[87/4][47/6]
$\text{C}_3\text{H}_4\text{O}_5$	tartronic acid				[83/26]
		$116.4 \pm 0.3$		C	[80-69-3]
$\text{C}_3\text{H}_4\text{S}_3$	1,3-dithiolan-2-thione				[822-38-8]
	(294–303)	$81.8 \pm 0.8$	(298)		[67/5][70/1]
$\text{C}_3\text{H}_5\text{NO}$	acrylamide				[79-06-1]
	(303–358)	81.8	(330)		[57/6]
$\text{C}_3\text{H}_5\text{NO}$	2-azetidinone				[930-21-2]
		$77.4 \pm 0.3$	(298)	ME	[96/21]
$\text{C}_3\text{H}_6$	cyclopropane				[75-19-4]
		29.2	(145)	B	[63/6]
		27.4	(298)	H	
	(115–141)	28.2	(128)	A,MS	[51/15]
$\text{C}_3\text{H}_6\text{N}_2\text{O}$	2-imadazolidinone				[120-93-4]
		83.7	(298)		[99/32]
$\text{C}_3\text{H}_6\text{N}_2\text{O}_2$	acetylurea				[591-07-1]
	(360–407)	$102.4 \pm 0.7$	(383)	C	[88/12]
		$103.1 \pm 0.7$	(298)		[88/12]
		$103.1 \pm 0.7$	(298)	C	[85/5]
$\text{C}_3\text{H}_6\text{N}_2\text{O}_2$	malonamide				[108-13-4]
	(397–403)	$126.4 \pm 0.5$	(298)	C	[89/17]
$\text{C}_3\text{H}_6\text{N}_4$	1,5-dimethyltetrazole				[5144-11-6]
	(303–343)	$86.2 \pm 1.0$		ME	[90/31]
$\text{C}_3\text{H}_6\text{N}_6$	2,4,6-triamino-s-triazine (melamine)				[108-78-1]
	(417–531)	$121.3 \pm 4.2$	(474)	GS	[60/6][70/1]
	(417–447)	123.3	(432)		[87/4]
	$\text{N},\text{N}',\text{N}''\text{-trinitrosohexahydrotriazine}$				[13980-04-6]
$\text{C}_3\text{H}_6\text{N}_6\text{O}_3$	(343–447)	$134.3 \pm 0.7$	(298)	ME	[78/15]
	(383–411)	112.1		ME	[74/11]
		112.1			[53/6][60/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_3\text{H}_6\text{N}_6\text{O}_6$	N,N',N''-trinitrohexahydrotriazine	134.3	(298)		[121-82-4]
	(325–360)	$112.5 \pm 0.8$		ME	[78/15]
	(329–371)	130.1	(350)		[74/11]
$\text{C}_3\text{H}_6\text{O}_2$	propionic acid				[69/12]
	(225–238)	$74.1 \pm 1$	(233)	TE	[79-09-4]
$(\text{C}_3\text{H}_6\text{O}_2)_2$	propionic acid dimer	$73.2 \pm 1$	(233)	ME	[78/16]
	(225–238)	$81.3 \pm 1$	(233)	TE	[78/16]
		$79.4 \pm 1$	(233)	ME	[78/16]
$\text{C}_3\text{H}_6\text{O}_3$	1,3,5-trioxane	57.9	(223)	TE,ME	[32574-16-6]
	(212–231)	55.6	(298)		[83/7]
		56.5	(298)	C	[83/7]
		$56.2 \pm 0.2$	(298)	C	[75/17]
$\text{C}_3\text{H}_6\text{S}_3$	1,3,5-trithiane	$93.2 \pm 0.2$	(298)	ME	[69/8][77/1]
	(320–339)	91.5	(331)	TE,ME	[291-21-4]
		93.9	(298)		[01/14]
$\text{C}_3\text{H}_7\text{NO}$	acetone oxime	59.6	(323)	I	[87/4][75/33]
	(313–333)				[127-06-0]
$\text{C}_3\text{H}_7\text{NO}$	N-methyl acetamide	$70.8 \pm 2.0$	(298)		[79-16-3]
	(288–303)	54.0			[96/21]
	(283–343)	$75 \pm 4.0$	(298)	TE	[52/4][60/1]
$\text{C}_3\text{H}_7\text{NO}$	propanamide	$79.2 \pm 0.3$			[79-05-0]
	(318–346)	73.3			[00/1]
		$79.1 \pm 0.4$		GS	[75/18][77/1]
$\text{C}_3\text{H}_7\text{NO}_2$	L-(d)-alanine	$132.8 \pm 1$	(414)	TE,ME	[59/3]
	(407–426)	$132.4 \pm 1.3$	(433)	C	[56-41-7]
	(413–450)	$144.8 \pm 4.2$	(298)		[77/3]
$\text{C}_3\text{H}_7\text{NO}_2$	D-(l)-alanine	U 105±8	(392)	LE	[76/10]
	(342–442)	138.3±8	(461)	ME	[65/1][70/1]
	(453–469)				[64/16]
$\text{C}_3\text{H}_7\text{NO}_2$	$\beta$ -alanine	$133.1 \pm 0.7$	(393)	C	[107-95-9]
	(384–402)	134±2	(298)	C	[83/24]
	(318–418)	U 105±4	(368)	LE	[83/7]
$\text{C}_3\text{H}_7\text{NO}_2$	ethyl carbamate	77.7	(265)	TE,ME	[77/2]
	(256–273)	76.3	(298)		[51-79-6]
		71.9	(322)		[83/7]
$\text{C}_3\text{H}_7\text{NO}_2$	sarcosine (N-methylglycine)	$89.1 \pm 0.8$	(299)	GS	[76/10]
	(380–413)	146±1	(298)	C	[59/4]
$\text{C}_3\text{H}_7\text{NO}_3$	DL-serine	U 83.7±4	(404)	LE	[107-97-1]
	(354–454)				[78/4]
$\text{C}_3\text{H}_7\text{NO}_2\text{S}$	L-cysteine	U 96.2±4.2	(387)	LE	[302-84-1]
	(337–437)				[77/2]
$\text{C}_3\text{H}_8$	propane	28.5	(86)	B	[52-90-4]
$\text{C}_3\text{H}_8\text{N}_2\text{O}$	N-ethylurea	91.8±1.2	(354)	TE	[63/6]
	(333–365)	100.3±0.2	(343)		[625-52-5]
$\text{C}_3\text{H}_8\text{N}_2\text{O}$	1,1-dimethylurea	$92.5 \pm 1.3$	(357)	TE	[90/5][87/5]
	(326–369)	99.1±0.4	(348)		[86/6][90/5]
$\text{C}_3\text{H}_8\text{N}_2\text{O}$	1,3-dimethylurea	$87.2 \pm 0.6$	(353)	TE	[598-94-7]
	(316–373)				[90/5][87/5]
$\text{C}_3\text{H}_8\text{N}_2\text{S}$	1,3-dimethylthiourea				[96-31-1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_3\text{H}_8\text{N}_2\text{S}$	1-ethylthiourea	111.8±3	(298)	B,HA	[00/23]
		107.3±4.0	(298)	B	[94/17]
		108±3.0	(361)	B	[94/20]
$\text{C}_3\text{H}_8\text{O}_2\text{S}$	ethyl methyl sulfone	118.8±5	(298)	ME	[00/23]
		77.8±2.9			[594-43-4]
$\text{C}_3\text{H}_9\text{NO}_2\text{S}$	trimethyl amine · sulfur dioxide complex (292–349)	60.6	(307)		[177634-55-8]
		49.0±1.5	(268)	PG	[87/4][43/3]
$\text{C}_4\text{F}_6\text{NS}_2$	bis(trifluoromethyl)-1,3,2-dithiazol-2-yl (253–283)	65.3	(307)		[393-02-2]
		44.3	(268)	I	[1071-98-3]
$\text{C}_4\text{F}_{12}\text{P}_4$	1,2,3,4-tetrakis(trifluoromethyl)tetraphosphetane (292–339)	49.0±1.5	(268)	PG	[87/4][58/20]
		74.7±0.8	(298)	ME	[57/4][75/10]
$\text{C}_4\text{N}_2$	dicyanoacetylene (263–273)	44.3	(268)	I	[87/4]
		75.6±0.8	(277)	ME	[709-62-6]
$\text{C}_4\text{HF}_6\text{N}_3$	3,5-bis(trifluoromethyl)-1,2,4-triazole (271–283)	74.7±0.8	(298)		[94/22]
		36.2	(211)	A	[460-12-8]
		36.3			[33/3]
$\text{C}_4\text{H}_2$	butadiyne (190–232)	69.6	(260)	TE,ME	[764-42-1]
		68.6	(298)		[83/7]
$\text{C}_4\text{H}_2\text{N}_2$	fumaronitrile (250–269)	72±0.8	(263)	ME	[67/3][70/1]
		73.9±0.4	(298)	C	[1452-15-9]
$\text{C}_4\text{H}_2\text{N}_2\text{S}$	4-cyanothiazole	85.4	(317)		[66/5][70/1]
		68.8	(258)	TE,ME	[108-31-6]
$\text{C}_4\text{H}_2\text{O}_3$	maleic anhydride (308–326)	70.0	(298)		[87/4]
		71.5±5			[83/7]
$\text{C}_4\text{H}_2\text{O}_4$	butyndioic acid	NA			[78/10]
		152.5	(486)	ME,TE	[49/2][70/1]
$\text{C}_4\text{H}_2\text{O}_4$	3,4-dihydroxy-3-cyclobutene-1,2-dione (469–499)	154.3	(298)		[110-16-7]
		83.7±16.7	(298)	E	[72/7]
$\text{C}_4\text{H}_3\text{BrN}_2\text{O}_2$	5-bromouracil	128.4		LE	[71/5][77/1]
		75.3±2.1			[51-20-7]
$\text{C}_4\text{H}_3\text{FN}_2\text{O}_2$	5-fluorouracil	NA			[51-21-8]
		148.4±1.5	(435)		[02/1]
$\text{C}_4\text{H}_3\text{NO}_3$	2-nitrofuran	98.8	(288)		[609-39-2]
		144±1.5	(438)		[80/28][86/5]
$\text{C}_4\text{H}_4\text{BrN}_3\text{O}$	5-bromocytosine (403–468)	88.7	(325)	ME	[2240-25-7]
		148.4±1.5	(435)		[75/14]
$\text{C}_4\text{H}_4\text{Cl}_4\text{O}_2\text{S}$	3,3,5,5-tetrachlorotetrahydrothiophene 1,1-dioxide (303–348)	98.8	(288)		[3737-41-5]
		128.4	(325)		[78/31]
$\text{C}_4\text{H}_4\text{F}_3\text{NO}_3$	N-(trifluoroacetyl)aminoacetic acid (273–393)	144±1.5	(438)		[383-70-0]
		56.2	(303)	C	[87/4][60/20]
$\text{C}_4\text{H}_4\text{IN}_3\text{O}$	5-iodocytosine (4-amino-5-iodopyrimidinone) (413–463)	56.3±0.5			[1122-44-7]
		129.3	(289)	LE	[75/14]
$\text{C}_4\text{H}_4\text{N}_2$	pyrazine (288–317)	125.5			[290-37-9]
		125.5	(289)		[95/5]
$\text{C}_4\text{H}_4\text{N}_2$	succinonitrile (279–298)	125.5			[62/4][70/1]
		70±0.3	(289)		[110-61-2]
$\text{C}_4\text{H}_4\text{N}_2\text{OS}$	2-thiouracil	125.5			[60/7][77/1]
		125.5	(289)		[141-90-2]
$\text{C}_4\text{H}_4\text{N}_2\text{OS}$ $\text{CH}_2\text{N}_4$	4-thiouracil tetrazole	125.5		LE	[74/8]
		125.5	(289)		[591-28-6]
		125.5	(289)		[288-94-8]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>2</sub>	pyrazine 1,4-dioxide	116.9±0.8	(298)	C	[2423-84-9] [97/25]
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>2</sub>	uracil	127.0±2.0	(439)	TE	[66-22-8] [00/2]
	(394–494)	130.6±4.0	(519)	ME,TE	[80/18]
	(452–587)	131±5	(298)	TE,GS	[80/18]
	(452–587)	120.5±1.3	(403)	QR	[80/19]
	(378–428)	121.7	(425)	MS	[79/28]
	(500–545)	133.9±8	(523)	HSA	[78/17]
	(393–458)	126.5±2.2	(440)	C	[77/13]
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>2</sub> S	120.5±5.2	(426)	LE	[75/16][74/8]	
	115.5±2.1	(426)	ME	[72/32][00/2]	
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>2</sub> S	U 83.7	(485)	MS	[65/2]	
	thiobarbituric acid				[504-17-6]
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>3</sub>	(400–461)	110±4.0	(430)	TE	[99/6]
	barbituric acid				[67-52-7]
	(294–438)	111.3±0.3		GS	[99/42]
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>3</sub>	(392–493)	113±4.0	(442)	TE	[99/6]
	(404–479)	123.3±1.7	(440)	ME	[90/32]
	2,4-dithiouracil				[2001-93-6]
C <sub>4</sub> H <sub>4</sub> N <sub>6</sub>	(393–443)	119.7±2.4	(418)		[75/14]
	8-azaadenine				[1123-54-2]
C <sub>4</sub> H <sub>4</sub> N <sub>8</sub> O <sub>13</sub>	(418–463)	128.4±1.3	(440)		[75/14]
	bis-(2,2,2-trinitroethyl)-N-nitrosoamine				[34882-73-0]
C <sub>4</sub> H <sub>4</sub> N <sub>8</sub> O <sub>14</sub>	(333–354)	97.9±0.8	(343)	ME	[73/1]
	bis-(2,2,2-trinitroethyl)-N-nitroamine				[19836-28-3]
C <sub>4</sub> H <sub>4</sub> O	(340–356)	117.6±0.8	(348)	ME	[73/1]
	furan				[110-00-9]
C <sub>4</sub> H <sub>4</sub> O <sub>2</sub>	(173–187)	39.2	(180)		[53/15]
	cyclobutane-1,2-dione				[33689-28-0]
	(251–289)	69.1±3.5	(270)	HSA	[U/5]
C <sub>4</sub> H <sub>4</sub> O <sub>2</sub>	(295–335)	54.8	(315)		[85/2]
	cyclobutane-1,3-dione				[15506-53-3]
C <sub>4</sub> H <sub>4</sub> O <sub>3</sub>	(274–322)	73.6±3.7	(298)	HSA	[78/14]
	succinic anhydride				[108-30-5]
	(298–320)	80.5±1.6	(309)	ME	[90/4]
C <sub>4</sub> H <sub>4</sub> O <sub>4</sub>	(290–311)	80.7±1.6	(298)	C	[90/4]
	cis-butenedioic acid				[83/7]
	(348–389)	82.2	(302)	ME,TE	
C <sub>4</sub> H <sub>4</sub> O <sub>4</sub>	(357–367)	105.4±1.7	(368)	ME	[110-16-7]
		110±2.5			[74/5]
					[38/1][60/1]
C <sub>4</sub> H <sub>4</sub> O <sub>4</sub>	(356–371)	109±4.2			[70/1]
	trans-butenedioic acid				[34/1]
	(371–391)	123.6±2.0	(381)	TE,ME	[110-17-8]
C <sub>4</sub> H <sub>4</sub> O <sub>4</sub>		136±6.3	(365)	QF	[77/4]
					[38/1][35/1]
C <sub>4</sub> H <sub>4</sub> O <sub>4</sub>	(358–371)	134.3±4.2			[60/1]
	diglycolic anhydride				[34/1]
C <sub>4</sub> H <sub>4</sub> S	(382–303)	84.2±1.1	(294)	ME,TE	[4480-83-5]
	thiophene				[83/7]
C <sub>4</sub> H <sub>5</sub> N	(195–228)	46.8	(213)		[110-02-1]
	(192–213)	49.0	(203)		[87/4][56/8]
C <sub>4</sub> H <sub>5</sub> NO <sub>2</sub>	pyrrole	NA			[44/1]
					[109-97-7]
					[41/3]
C <sub>4</sub> H <sub>5</sub> NO <sub>2</sub>	succinimide				[123-56-8]
	(317–340)	83.1±1.5	(329)	ME	[90/4]
		83.6±1.5	(298)		[90/4]
C <sub>4</sub> H <sub>5</sub> N <sub>3</sub> O		88.0		B	[89/27]
	cytosine				[71-30-7]
	(505–525)	151.7±0.7		GS	[98/37]
	(423–483)	147.2±2.6	(453)	ME	[84/12]
		155.0±3.0	(298)		[84/12]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		167±10	(298)	TE	[80/9]
	(450–470)	176±10	(298)	C	[80/21]
		NA			[77/15]
		150.6		ME	[74/8][75/16]
$\text{C}_4\text{H}_5\text{N}_3\text{O}_2$	5-aminouracil	145.6		LE	[74/8]
$\text{C}_4\text{H}_5\text{N}_3\text{O}_2$	6-azathymine	112.5±2.3	(380)		[932-53-6]
$\text{C}_4\text{H}_5\text{N}_3\text{S}$	2-thiocytosine	158±1.6	(433)		[333-49-3]
$\text{C}_4\text{H}_5\text{N}_7\text{O}_{12}$	bis-(2,2,2-trinitroethyl)amine	80.8±0.4		ME	[34880-53-0]
	(338–349)				[73/1][77/1]
$\text{C}_4\text{H}_6$	2-butyne	37.4	(220)	A	[503-17-3]
$\text{C}_4\text{H}_6\text{N}_2$	2-methylimidazole	88.2±0.7	(309)	ME	[693-98-1]
	(301–318)	88.4±0.7	(298)		[92/25]
$\text{C}_4\text{H}_6\text{N}_2\text{O}$	3-amino-5-methylisoxazole	81.6±2.5			[1072-67-9]
$\text{C}_4\text{H}_6\text{N}_2\text{O}_2$	2,5-piperazinedione	103.8±2.1	(428)	ME	[106-57-0]
	(413–450)				[87/4][56/7]
$\text{C}_4\text{H}_6\text{N}_4\text{O}$	2,4-diamino-6-hydroxypyrimidine	147.6±0.2		GS	[56-06-4]
	(423–471)				[99/42]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	1,1,3,3-tetranitrobutane	87.9±0.8	(298)		[3759-60-2]
					[99/35]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	2,2,3,3-tetranitrobutane	78.2±0.8	(298)		[20919-97-5]
					[99/35]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	1,1,1,3-tetranitro-2-methylpropane	91.2	(298)		[42216-58-0]
					[99/35]
$\text{C}_4\text{H}_6\text{N}_4\text{O}_8$	1,1,1,4-tetranitrobutane	99.6	(298)		[20919-96-4]
					[99/35]
$\text{C}_4\text{H}_6\text{O}_4$	dimethyl oxalate	74.6±0.7	(298)	C	[553-90-2]
	(268–298)	75.6±1.6	(283)	HSA	[96/10]
		75.3±1.6	(298)		[96/10]
		74.9±0.6		B	[96/10]
	(289–306)	47.4±0.5		BG	[76/5][75/13]
$\text{C}_4\text{H}_6\text{O}_4$	succinic acid	120.5	(368)	TE,ME	[110-15-6]
	(356–376)	123.1	(298)		[83/7]
	(372–401)	118.1±3.3	(386)	ME	[70/1][60/4]
		120.3±4.4	(298)		[70/1][60/4]
		121.8±3.3	(298)		[60/4][99/10]
	(292–320)	73.6	(306)	A	[47/6]
$\text{C}_4\text{H}_6\text{O}_6$	meso tartaric acid	156.9			[147-73-9]
					[83/23]
$\text{C}_4\text{H}_6\text{O}_4$	methylmalonic acid	116.2±0.9	(348)	ME	[516-05-2]
	(341–354)	117.4±1.9	(298)	ME	[00/22]
		113.2±0.4		C	[00/22]
					[83/26]
$\text{C}_4\text{H}_6\text{S}_3$	1,3-dithian-2-thione	88.6	(335)		[1748-15-8]
	(321–348)	91.4±2.5	(298)		[67/5]
					[67/5][70/1]
$\text{C}_4\text{H}_7\text{NO}$	cis 2-butenoic acid amide	68	(368)		[31110-30-2]
	(353–387)				[87/4]
$\text{C}_4\text{H}_7\text{NO}$	trans 2-butenoic acid amide	80	(378)		[625-37-6]
	(363–413)				[87/4]
$\text{C}_4\text{H}_7\text{NO}_2$	diacetamide	73.2±0.8	(298)	C	[625-77-4]
$\text{C}_4\text{H}_7\text{NO}_3$	N-acetylglycine	127.0±1.0	(389)	TE,ME	[65/8][71/23]
	(383–400)				[543-24-8]
$\text{C}_4\text{H}_7\text{NO}_4$	L-aspartic acid	U 96±4.2	(420)	LE	[79/1]
	(370–470)				[56-84-8]
					[77/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_4\text{H}_8$	cyclobutane	36.4	(145)	B	[287-23-0] [63/6]
$\text{C}_4\text{H}_8\text{Cl}_2\text{S}$	bis (2-chloroethyl)sulfide (263–287)	77.2 84.5	(275)	[505-60-2]	[87/4] [63/6][47/4]
$\text{C}_4\text{H}_8\text{Cl}_3\text{O}_4\text{P}$	(1-hydroxy-2,2,2-trichloroethyl)phosphonic acid dimethyl ester (293–357)	107	(308)	B	[52-68-6] [87/4]
$\text{C}_4\text{H}_8\text{N}_2\text{O}$	tetrahydro-2-pyrimidone	89.3	(298)		[1852-17-1] [99/32]
$\text{C}_4\text{H}_8\text{N}_2\text{O}_2$	1,2-diacetylhydrazine (347–358)	$103.1 \pm 1.7$	(352.5)		[3148-73-0] [87/4][59/12]
$\text{C}_4\text{H}_8\text{N}_2\text{O}_2$	dimethylglyoxime (331–352)	$96.8 \pm 1.3$ $97.1 \pm 1.3$	(341.5)	ME	[95-45-4] [87/4][56/7] [56/7][70/1]
$\text{C}_4\text{H}_8\text{N}_2\text{O}_2$	N-acetylglycine amide (378–406)	$123.5 \pm 1.7$ 126.3±2.3 140.2±2.3 135±3	(376) (298) (392)	C C TE	[60/1] [2620-63-5] [99/12] [99/12] [95/33] [88/6][86/16]
$\text{C}_4\text{H}_8\text{N}_2\text{O}_2$	N-nitrosomorpholine	81.6			[59-82-2] [88/20]
$\text{C}_4\text{H}_8\text{N}_4\text{O}_2$	1,4-dinitrosopiperazine (325–360)	$101.3 \pm 8$	(343)		[140-79-4] [74/11][77/1]
$\text{C}_4\text{H}_8\text{N}_4\text{O}_4$	1,4-dinitropiperazine (325–360)	$111.3 \pm 8$	(343)		[4164-37-8] [74/11][77/1]
$\text{C}_4\text{H}_8\text{N}_8\text{O}_8$	1,3,5,7-tetranitro-1,3,5,7-tetrazacyclooctane $\delta$ -form (461–487)	161.9	(474)		[2691-41-0] [76/8]
$\delta$ form	(415–479)	$161 \pm 0.3$	(447)		[78/15]
$\beta$ form	(371–403)	175.2	(385)		[69/12]
$\text{C}_4\text{H}_8\text{O}_2$	butanoic acid (238–255)	$76.0 \pm 1.5$	(248)	TE,ME	[107-92-6] [78/16]
$(\text{C}_4\text{H}_8\text{O}_2)_2$	butanoic acid dimer (238–255)	$85 \pm 1.5$	(248)	TE,ME	[19496-06-1] [78/16]
$\text{C}_4\text{H}_8\text{O}_2$	1,4-dioxane (237–272)	35.6	(255)	A	[123-91-1] [47/2]
$\text{C}_4\text{H}_8\text{O}_4$	1,3,5,7-tetroxane	$79.6 \pm 0.2$ 79.5	(298)	C C	[293-30-1] [77/1][69/8] [75/17]
$\text{C}_4\text{H}_8\text{S}_2$	1,3-dithiane (266–279)	$62.9 \pm 0.7$ 69.9±0.4 (250–271)	(298) (298) (263)	ME GC TE,ME	[505-23-7] [99/3] [89/30] [83/7] [71/23]
$\text{C}_4\text{H}_8\text{S}_2$	1,4-dithiane (253–276)	63.0 68.9 72.4	(298) (298) (268)		[505-29-3] [99/15] [89/30] [83/7]
$\text{C}_4\text{H}_9\text{I}$	2-iodo-2-methylpropane (202–223)	49.8	(212.5)	MG	[558-17-8] [87/4][44/2]
$\text{C}_4\text{H}_9\text{Li}$	butyl lithium (333–368)	109.7	(350.5)		[109-72-8] [87/4][62/12]
$\text{C}_4\text{H}_9\text{ONa}$	sodium <i>tert</i> -butoxide	NA			[865-48-5] [90/22]
$\text{C}_4\text{H}_9\text{NO}$	butanamide (298–347)	$82 \pm 4.0$ $86.4 \pm 0.4$ (292–304) (353–373)	(298)	TE	[541-35-5] [00/1] [75/18][77/1] [60/1]
		$85.4 \pm 1.7$ 87 (336–382) (298–341)	(298) (363) (359) (320)	ME GS ME	[73/19][77/1] [59/3] [59/3] [60/13]
$\text{C}_4\text{H}_9\text{NO}$	2-methylpropanamide	79.9			[563-83-7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_4\text{H}_9\text{NO}_2$	(288–354)	82±4	(298)	TE	[00/01]
	(285–302)	86.1±0.2	(294)	ME	[89/6]
		86.0±0.2	(298)		[89/6]
$\text{C}_4\text{H}_9\text{NO}_2$	2-aminoisobutyric acid				[62-57-7]
	(439–462)	125.8	(450.5)		[87/4][65/1]
	(403–424)	134.2±1.0	(413.5)	TE,ME	[87/4][79/1]
	(439–469)	125.9±0.4	(455)	ME	[65/1][64/16]
$\text{C}_4\text{H}_9\text{NO}_2$	DL-2-aminobutanoic acid				[2835-81-6]
	(400–418)	132±2	(409)	TE,ME	[79/1]
$\text{C}_4\text{H}_9\text{NO}_2$	L-2-aminobutanoic acid				[1492-24-6]
$\text{C}_4\text{H}_9\text{NO}_2$	162.8±0.8	(455)	ME		[65/1][64/16]
	4-aminobutanoic acid				[65-12-2]
	(384–407)	138.9±0.6	(395)	C	[83/24]
		140±2	(298)	C	[83/24]
$\text{C}_4\text{H}_9\text{NO}_3$	DL-threonine				[80-68-2]
$\text{C}_4\text{H}_9\text{NO}_3$	(341–441)	U 96±8	(391)	LE	[77/2]
	2-methyl-2-nitro-1-propanol				[76-39-1]
	plastic phase	59.5±3.0	(319)	C	[94/27]
$\text{C}_4\text{H}_9\text{NO}_4$	crystalline phase	73.2±3.7	(311)	C	[94/27]
	2-methyl-2-nitro-1,3-propanediol				[77-49-6]
	plastic phase	79.3±4.0	(368)	C	[94/27]
$\text{C}_4\text{H}_9\text{NO}_5$	crystalline phase	102.0±5.1	(339)	C	[94/27]
	2-hydroxymethyl-2-nitro-1,3-propanediol				[126-11-4]
	plastic phase	77.3±3.9	(368)	C	[94/27]
$\text{C}_4\text{H}_9\text{N}_3\text{O}_2$	1-[2-(ethenyl oxy)ethyl]-1-nitrosohydrazine				[216489-98-4]
$\text{C}_4\text{H}_{10}$		112.1±1.9	(298)		[98/36]
	<i>n</i> -butane				[106-97-8]
		35.9	(107)	B	[66/3]
$\text{C}_4\text{H}_{10}\text{N}_2$	piperazine				[110-85-0]
		72.1	(298)		[98/18]
		65.2	(385)	B	[97/39]
$\text{C}_4\text{H}_{10}\text{N}_2$	(279–321)	73.1	(294)		[87/4]
	trimethylammonium cyanide				[87/4]
	(219–236)	45	(227.5)		[927-67-3]
$\text{C}_4\text{H}_{10}\text{N}_2\text{O}$	N-propylurea				[90/5][87/5]
$\text{C}_4\text{H}_{10}\text{N}_2\text{O}$	(332–373)	90.7±1.0	(366)		[691-60-1]
	N-isopropylurea				[90/5]
	(368–411)	100.6±1.3	(389)		[90/5][86/6]
$\text{C}_4\text{H}_{10}\text{N}_2\text{S}$		99.7±0.4	(352)		[2489-77-2]
	trimethylthiourea				[94/20]
		83±3.0	(333)	TE	[75-65-0]
$\text{C}_4\text{H}_{10}\text{O}$	<i>tert</i> -butyl alcohol				[47/2]
$\text{C}_4\text{H}_{10}\text{O}_2\text{S}$	(253–298)	51.3	(275)	A	[597-35-3]
	diethyl sulfone				[U/3][70/1]
		86.2±2.5			[149-32-6]
$\text{C}_4\text{H}_{10}\text{O}_4$	<i>meso</i> -erythritol				[90/7]
		157	(298)	B	[50/1][60/1]
		135.1±2.2			[70/1]
$\text{C}_4\text{H}_{11}\text{NO}$	2-methyl-2-amino-1-propanol				[124-68-5]
	plastic phase	86.5±4.3	(368)	C	[94/27]
	crystalline phase	114.5±5.7	(339)	C	[94/27]
$\text{C}_4\text{H}_{11}\text{NO}_2$	diethanolamine				[111-42-2]
$\text{C}_5\text{Cl}_6$	hexachlorocyclopentadiene	105.9±2.	(298)	C	[82/5]
		73.6	(283)	B	[77-47-4]
					[63/6][58/5]
$\text{C}_5\text{F}_{10}$	decafluorocyclopentane	32.1	(266)		[376-77-2]
	(229–281)	38.2	(115)		[87/4][67/21]
					[63/6][51/8]
$\text{C}_5\text{F}_{12}$	<i>n</i> -dodecafluoropentane	43.7	(145)		[56/9]
					[678-26-2]
					[63/6][51/8]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_5\text{N}_4$	tetracyanomethane	$61.1 \pm 8.8$	(298)	DSC	[24331-09-7]
$\text{C}_5\text{H}_2\text{F}_6\text{N}_2$	3,5-bis(trifluoromethyl)pyrazole	$69.0 \pm 0.6$	(266)	ME	[14704-41-7]
$\text{C}_5\text{H}_2\text{N}_4\text{O}_6$	2,4,6-trinitropyridine (335–357)	$101.7 \pm 2.9$			[91/21]
$\text{C}_5\text{H}_2\text{N}_4\text{O}_7$	2,4,6-trinitropyridine N-oxide (377–403)	$106.3 \pm 2.9$			[78013-51-1]
$\text{C}_5\text{H}_3\text{Br}_2\text{N}$	2,5-dibromopyridine	$82.1 \pm 2.2$	(298)	C	[95/31]
$\text{C}_5\text{H}_3\text{Br}_2\text{N}$	2,6-dibromopyridine	$85.6 \pm 3.0$	(298)	C	[624-28-2]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	2,3-dichloropyridine	$73.5 \pm 3.1$	(298)	C	[97/16]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	2,5-dichloropyridine	$67.1 \pm 2.0$	(298)	C	[2402-77-9]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	2,6-dichloropyridine	$72.0 \pm 1.6$	(298)	C	[16110-09-1]
$\text{C}_5\text{H}_3\text{Cl}_2\text{N}$	3,5-dichloropyridine	$67.3 \pm 1.9$	(298)	C	[97/17]
$\text{C}_5\text{H}_3\text{NO}_3$	5-nitro-2-furancarboxaldehyde	$75.3 \pm 2.1$			[698-63-5]
$\text{C}_5\text{H}_3\text{N}_3$	2,2-dicyanopropionitrile (293–333)	$73.9 \pm 0.5$	(313)	T	[80/28][86/5]
$\text{C}_5\text{H}_4\text{N}_2\text{O}_3$	4-nitropyridine-N-oxide (311–335)	$108.9 \pm 0.3$ $89.1 \pm 2.5$	(298)	C	[10359-20-3]
$\text{C}_5\text{H}_4\text{N}_4$	purine	NA			[94/19]
$\text{C}_5\text{H}_4\text{N}_4$	1,2,4-triazolo[1,5a]pyrimidine	86.9	(419)		[120-73-0]
$\text{C}_5\text{H}_4\text{N}_4\text{O}$	hypoxanthine (423–473)	$158.1 \pm 1.6$	(448)		[74/7]
$\text{C}_5\text{H}_4\text{N}_4\text{S}$	6-mercaptopurine (413–458)	$148.5 \pm 1.5$	(435)		[68-94-0]
$\text{C}_5\text{H}_4\text{O}_2\text{S}$	2-thenoic acid (315–323)	97.1	(319)	E	[75/14]
$\text{C}_5\text{H}_4\text{O}_3$	2-furoic acid (317–328)	$108.4 \pm 2.2$		ME	[527-72-0]
$\text{C}_5\text{H}_5\text{ClN}_2\text{O}_2$	1-methyl-6-chlorouracil (417–465)	$108.8 \pm 8$		HSA	[31737-09-4]
$\text{C}_5\text{H}_5\text{ClN}_2\text{O}_2$	3-methyl-6-chlorouracil (444–493)	$104.6 \pm 6$		HSA	[78/17]
$\text{C}_5\text{H}_5\text{FN}_2\text{O}_2$	1-methyl-5-fluorouracil (381–423)	$116.5 \pm 1.9$	(402)	TE	[4318-56-3]
$\text{C}_5\text{H}_5\text{FN}_2\text{O}_2$	(480–515)	$125.5 \pm 8$		HSA	[02/1]
$\text{C}_5\text{H}_5\text{FN}_2\text{O}_2$	3-methyl-5-fluorouracil (465–487)	$79.5 \pm 17$		HSA	[78/17]
$\text{C}_5\text{H}_5\text{F}_3\text{N}_2$	3(5)-trifluoromethyl-5(3)-methylpyrazole	$78.2 \pm 0.8$	(297)	ME	[4840-69-1]
$\text{C}_5\text{H}_5\text{NO}$	2-hydroxypyridine	$86.6 \pm 1.3$	(298)	C	[109/00-2]
$\text{C}_5\text{H}_5\text{NO}$	3-hydroxypyridine	$88.3 \pm 1.3$	(298)	C	[82/15][86/5]
$\text{C}_5\text{H}_5\text{NO}$	4-hydroxypyridine	$118.6 \pm 5.2$	(298)	C	[92/3]
$\text{C}_5\text{H}_5\text{NO}$		$103.8 \pm 1.7$	(298)	C	[82/15][86/5]
$\text{C}_5\text{H}_5\text{NO}$	pyridine N-oxide	$79.3 \pm 1.0$	(298)		[694-59-7]
$\text{C}_5\text{H}_5\text{NO}_2$	3-hydroxypyridine N-oxide (345–392)	$121.8 \pm 4.4$	(298)	ME	[88/19]
$\text{C}_5\text{H}_5\text{NO}_2$	pyrrole-2-carboxylic acid				[6602-28-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_5\text{H}_5\text{NO}_2$	(350–354)	126.8	(352)	ME	[53/12][60/1]
	N-methylmaleimide				[930-88-1]
	(276–289)	75.3±0.5	(282)	ME	[97/12]
$\text{C}_5\text{H}_5\text{N}_3\text{O}$		73.3±0.5	(298)		[97/12]
	pyrazine carboxamide				[98-96-4]
	(353–383)	87.9	(368)	ME	[87/4][60/16]
$\text{C}_5\text{H}_5\text{N}_5$	adenine				[59/13]
	(400–438)	140.4		ME	[73-24-5]
	(448–473)	109.2	(460.5)		[00/17]
		126.3		LE	[87/4]
		127.2		QR	[75/16][74/8]
$\text{C}_5\text{H}_5\text{N}_5\text{O}$		108.7±8		ME	[84/38][00/17]
	guanine				[65/2][70/1]
		186.2		LE	[73-40-5]
$\text{C}_5\text{H}_5\text{N}_7\text{O}_{14}$	1,1,1,3,5,5,5-heptanitropentane				[75/16][74/8]
		111.7	(298)		[20919-99-7]
$\text{C}_5\text{H}_6\text{F}_3\text{NO}_3$	glycine, N-(trifluoroacetyl) methyl ester				[99/35]
	(293–463)	57.3	(308)		[383-72-2]
$\text{C}_5\text{H}_6\text{N}_2$	dimethylmalonodinitrile				[87/4][60/20]
		62.0±0.7	(298)		[7321-55-3]
$\text{C}_5\text{H}_6\text{N}_2$	2-aminopyridine				[90/28]
		76.5±0.4	(298)	C	[504-29-0]
		38.6±1.9		DSC	[98/17]
$\text{C}_5\text{H}_6\text{N}_2$		78.7±0.8	(298)	C	[85/13]
	3-aminopyridine				[84/6]
		80.7±0.3	(298)	C	[462-08-8]
$\text{C}_5\text{H}_6\text{N}_2$		84.0±1.4	(298)	C	[98/17]
	4-aminopyridine				[84/6]
		87.1±0.4	(298)	C	[504-24-5]
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$		53.8±0.8		DSC	[98/17]
		88.1±1.1	(298)	C	[85/13]
	1-methyluracil				[84/6]
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$	(343–428)	121.7±4.0	(439)	TE	[615-77-0]
	(378–418)	112.5±2.6	(398)	QR	[00/2]
	(435–480)	104.6±8	(457)	HSA	[80/19]
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$	3-methyluracil				[78/17]
	(344–419)	118.8±3.0	(382)	TE	[608-34-4]
	(438–498)	75.3±8	(463)	HSA	[00/2]
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$		69.5±1.2		ME	[78/17]
	5-methyluracil (thymine)				[72/32][00/2]
	(383–438)	125.7±3.6	(411)	ME	[65-71-4]
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$		131.3±4.0	(298)		[84/12]
		124.4±1.3	(403)	QR	[84/12]
		138±10	(298)	TE	[80/19]
		134.1±4.2	(298)	C	[80/9]
		124.3		LE	[77/13]
$\text{C}_5\text{H}_6\text{N}_2\text{O}_2$	6-methyluracil				[75/16][74/8]
	(426–503)	131	(298)		[626-48-2]
$\text{C}_5\text{H}_6\text{O}_3$	glutaric anhydride				[80/13]
	(298–320)	85.9±1.6	(309)	ME	[108-55-4]
$\text{C}_5\text{H}_7\text{N}$		86.1±1.6	(298)		[90/4]
	N-methylpyrrole	NA			[90/4]
$\text{C}_5\text{H}_7\text{NO}_2$	glutarimide				[96-54-8]
	(317–340)	93.6±1.6	(329)	ME	[41/3]
$\text{C}_5\text{H}_7\text{NO}_2$		94.1±1.6	(298)		[1121-89-7]
					[90/4]
$\text{C}_5\text{H}_7\text{NO}_2$	N-methylsuccinimide				[90/4]
	(280–298)	80.6±0.3	(289)	ME	[1121-07-9]
$\text{C}_5\text{H}_7\text{NO}_3$		80.1±0.3	(298)		[97/12]
	(dl)-5-oxoprolidine				[97/12]
$\text{C}_5\text{H}_7\text{N}_3\text{O}$	(394–416)	133.2±1	(405)	ME,TE	[149-87-1]
	1-methylcytosine				[79/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m / \text{kJ mol}^{-1}$	( $T_m / \text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_5\text{H}_7\text{N}_3\text{O}$	(455–487)	141.2±0.6		GS	[98/37]
	(423–443)	141.8±8.8	(433)	ME	[84/12]
		149.1±9.0	(298)		[84/12]
$\text{C}_5\text{H}_7\text{N}_3\text{O}$	3-methylcytosine				[4776-08-3]
$\text{C}_5\text{H}_7\text{N}_3\text{O}$	(487–526)	150.6		HSA	[65/2]
	3,5-dimethyl-4-nitrosopyrazole				[1122-04-9]
$\text{C}_5\text{H}_7\text{N}_3\text{O}_2$	1-methyl-N-hydroxycytosine	102.9±3.0	(298)	C	[01/4]
$\text{C}_5\text{H}_8\text{Br}_4$		126.7±1.5			[20541-50-8]
	pentaerythrityl tetrabromide				[98/37]
$\text{C}_5\text{H}_8\text{NO}_2$	(384–434)	84	(399)	GSM	[3229-00-3]
	5-amino-3,4-dimethylisoxazole				[87/4][41/1]
$\text{C}_5\text{H}_8\text{N}_2$		87.9±2.5			[19947-75-2]
$\text{C}_5\text{H}_8\text{N}_2$	2,3-diazabicyclo[2.2.1]hept-2-ene	43.9±2.1			[73/21][77/1]
		55.3±0.6	(298)		[2721-32-6]
	3,5-dimethylpyrazole	83.4±2.4	(298)	C	[74/17][77/1]
$\text{C}_5\text{H}_8\text{N}_2$		83.3±0.2	(301)	ME	[67-51-6]
	2-ethylimidazole	89.2±0.4	(312)	ME	[91/21]
	(303–321)	89.6±0.4	(298)		[1072-62-4]
$\text{C}_5\text{H}_8\text{N}_4\text{O}_{12}$	pentaerythritol tetranitrate	150.4±1.3		ME	[92/25]
	(328–405)	146±12			[92/25]
		U121.3		ME	[78-11-5]
	(370–411)	151.9±2.1			[78/15]
$\text{C}_5\text{H}_8\text{OS}$	tetrahydro-4 <i>H</i> -thiopyran-4-one	71.7±1.7	(317)	I	[71/34][78/15]
		72.6±1.7	(298)		[70/1]
$\text{C}_5\text{H}_8\text{O}_2$	methyl methacrylate	60.7	(205)		[53/6][60/1]
$\text{C}_5\text{H}_8\text{O}_2\text{S}$	(194–223)				[80-62-6]
	2,5-dihydro-2-methyl-thiophene-1,1-dioxide	60.7±2.5			[52/5][60/1]
$\text{C}_5\text{H}_8\text{O}_2\text{S}$					[6007-71-2]
	2,5-dihydro-3-methyl-thiophene-1,1-dioxide	64.0±2.5			[69/11][77/1]
$\text{C}_5\text{H}_8\text{O}_4$	1,5-pentanedioic acid (glutaric acid)	117.0±1.2	(356)	ME	[119-94-1]
	(348–363)	119.8±1.2	(298)		[99/10]
	(292–320)	U52.6	(306)	A	[99/10]
$\text{C}_5\text{H}_8\text{O}_4$	dimethylmalonic acid	110.2±1.0	(355)	ME	[47/6]
	(347–363)	111.7±2.1	(298)	ME	[595-46-0]
$\text{C}_5\text{H}_8\text{O}_4$	ethylmalonic acid	111.2±1.2	(355)	ME	[00/22]
	(347–362)	112.8±2.2	(298)	ME	[00/22]
		105.5±0.5		C	[601-75-2]
$\text{C}_5\text{H}_9\text{NO}$	<i>cis</i> 2-pentenoic acid amide	106.5	(328)		[83/26]
$\text{C}_5\text{H}_9\text{NO}$	(323–333)				[15856-96-9]
	<i>trans</i> 2-pentenoic acid amide	57.9	(368)		[87/4]
$\text{C}_5\text{H}_9\text{NO}$	(353–383)				[15856-96-9]
	$\delta$ -valerolactam	74.5	(303)		[675-20-7]
$\text{C}_5\text{H}_9\text{NO}_2$	L-( <i>l</i> )-proline	127.4±1	(406)	TE,ME	[53/5][60/1]
	(396–416)	149±4	(400)	C	[79/1]
	(380–420)	U 50±8	(373)	LE	[78/4]
$\text{C}_5\text{H}_9\text{NO}_3$	(323–423)				[77/2]
	<i>trans</i> 4-hydroxy-L-proline	162.6±2	(471)	TE,ME	[51-35-4]
$\text{C}_5\text{H}_9\text{NO}_4$	(461–481)				[79/1]
	L-glutamic acid	U 121±34	(403)	LE	[56-86-0]
	(353–453)				[77/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_5\text{H}_{10}$	cyclopentane	42.6	(122)	B	[287-92-3] [63/6]
$\text{C}_5\text{H}_{10}\text{N}_2\text{O}_2$	N-acetylglycine, N-methylamide (348–363)	97.8	(355.5)		[7606-79-3] [87/4][55/7]
$\text{C}_5\text{H}_{10}\text{N}_2\text{O}_2$	N-acetyl-L-alanine amide (366–410)	$115.0 \pm 1.2$ $118.1 \pm 1.6$ $115 \pm 3$	(376) (298) (388)	C TE	[99/12] [99/12] [88/6][86/16] [75-98-9]
$\text{C}_5\text{H}_{10}\text{O}_2$	2,2-dimethylpropanoic acid (278–303)	$62.3 \pm 0.6$ $62.1 \pm 0.6$	(291) (298)	GS GS	[00/20] [00/20]
$\text{C}_5\text{H}_{10}\text{O}_5$	1,3,5,7,9-pentoxecane	$87.9 \pm 0.5$	(298)	C	[16528-92-0] [74/16]
$\text{C}_5\text{H}_{10}\text{O}_5$	D-xylose (370–395)	$158.0 \pm 3.1$	(382)	ME	[58-86-6] [99/1]
$\text{C}_5\text{H}_{11}\text{NO}$	pentanamide (333–374)	$89.3 \pm 0.4$		GS	[626-97-1] [59/3][70/1]
$\text{C}_5\text{H}_{11}\text{NO}$	(353–373)	89.1			[60/1]
$\text{C}_5\text{H}_{11}\text{NO}$	2,2-dimethylpropanamide (298–359)	$89 \pm 2.0$	(298)	TE	[759-10-9] [00/1]
$\text{C}_5\text{H}_{11}\text{NO}$	(288–306)	$86.6 \pm 0.4$	(298)	ME	[89/6]
$\text{C}_5\text{H}_{11}\text{NO}_2$	( <i>dl</i> ) 2-aminopentanoic acid (DL-norvaline) (439–461)	120 $121.1 \pm 0.4$	(450) (455)	ME ME	[760-78-1] [87/4][65/1] [65/1][64/16]
$\text{C}_5\text{H}_{11}\text{NO}_2$	butyl carbamate (292–316)	$94.1 \pm 8$		GS	[592-35-8] [59/4]
$\text{C}_5\text{H}_{11}\text{NO}_2$	DL-valine (320–420)	$U 79.5 \pm 8$	(370)	LE	[516-06-3] [77/2]
$\text{C}_5\text{H}_{11}\text{NO}_2$	L-valine	$162.8 \pm 8$	(455)	ME	[72-18-4] [65/1][64/16]
$\text{C}_5\text{H}_{11}\text{NO}_2$	5-aminopentanoic acid (384–394)	$141.8 \pm 0.5$ 144±3	(389) (289)	C C	[660-88-8] [83/24] [83/24]
$\text{C}_5\text{H}_{11}\text{NO}_2\text{S}$	DL-methionine (363–463)	$U 134 \pm 8$	(413)	LE	[59-51-8] [77/2]
$\text{C}_5\text{H}_{11}\text{NO}_2\text{S}$	L-( <i>d</i> )-methionine (463–485)	$125 \pm 0.8$ $164 \pm 4$	(474) (298)	ME C	[63-68-3] [87/4][65/1] [64/16] [81/5]
$\text{C}_5\text{H}_{12}$	2,2-dimethylpropane (223–256)	28.2 33.2	(241)		[463-82-1] [87/4] [63/6][36/1]
$\text{C}_5\text{H}_{12}$	(171–249)	23.9	(210)	A	[47/2]
$\text{C}_5\text{H}_{12}$	(230–252)	22.0 22.8	(298) (241)	H A	
$\text{C}_5\text{H}_{12}$	<i>n</i> -pentane	42.0	(143)	B	[33/6] [109-66-0] [63/6]
$\text{C}_5\text{H}_{12}\text{N}_2\text{O}$	1,3-diethylurea (321–379)	$96.8 \pm 0.9$	(361)	TE	[623-76-7] [90/5][87/5]
$\text{C}_5\text{H}_{12}\text{N}_2\text{O}$	(384–590)	NA		ME	[86/19]
$\text{C}_5\text{H}_{12}\text{N}_2\text{O}$	N-butylyurea	$99 \pm 4$ $103.2 \pm 0.8$	(352)		[592-31-4] [87/6] [86/6][90/5]
$\text{C}_5\text{H}_{12}\text{N}_2\text{O}$	N-isobutylyurea	$101.1 \pm 1.1$ $106.0 \pm 0.5$	(377) (355)	TE	[592-17-6] [90/5] [90/5][86/6]
$\text{C}_5\text{H}_{12}\text{N}_2\text{O}$	N- <i>tert</i> -butylyurea	$101.6 \pm 0.7$ $100.7 \pm 0.3$	(379) (352)	TE	[1118-12-3] [90/5] [90/7][86/6]
$\text{C}_5\text{H}_{12}\text{N}_2\text{S}$	diethylthiourea	$121.7 \pm 3$ $120.2 \pm 3.0$	(298) (298)	B, HA B	[26914-14-7] [00/23] [94/17]
$\text{C}_5\text{H}_{12}\text{N}_2\text{S}$	tetramethylthiourea				[2782-91-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_5\text{H}_{12}\text{O}_2$	neopentyl glycol	84.5±3	(298)	ME	[00/23]
	plastic phase	84.0	(298)		[94/20]
	crystalline phase	83.0±0.5	(298)	C	[85/5]
		83.0±0.2	(298)	C	[82/7]
$\text{C}_5\text{H}_{12}\text{O}_3$	1,1,1-tris(hydroxymethyl)ethane				[126-30-7]
	plastic phase	75.5±3.8	(368)	C	[94/3][94/27]
	crystalline phase	87.6±4.4	(350)	C	[94/3][94/27]
					[77-85-0]
$\text{C}_5\text{H}_{12}\text{O}_2\text{S}$	plastic phase	84.2±4.2	(319)	C	[94/27]
	crystalline phase	109.2±5.5	(311)	C	[94/27]
	<i>tert</i> -butyl methyl sulfone				[14094-12-3]
$\text{C}_5\text{H}_{12}\text{O}_4$	pentaerythritol	82.4±2.5			[U/3][70/1]
		131.3±6.6	(403)	C	[115-77-5]
	(418–455)	161±1.0	(437)	TE	[94/27]
		163	(298)		[90/7]
(tetragonal)	(397–410)	131.4		ME	[51/3][60/1]
	(379–408)	143.9±0.8			[53/4][60/1]
$\text{C}_5\text{H}_{12}\text{O}_5$	adonitol	161	(298)	B	[488-81-3]
$\text{C}_5\text{H}_{12}\text{O}_5$	D-arabitol	160	(298)	B	[90/7]
$\text{C}_5\text{H}_{12}\text{O}_5$	xylitol	161	(298)	B	[488-82-4]
$\text{C}_6\text{Cl}_4\text{O}_2$	tetrachloro-1,4-benzoquinone				[87-99-0]
	(333–356)	98.7±8.3		QF	[27/2][60/1]
$\text{C}_6\text{Cl}_6$	hexachlorobenzene				[70/1]
	(258–313)	105			[118-74-1]
	(253–303)	77.4±0.8	(278)	GS	[94/39]
		89.6±0.2	(337)	C	[94/1]
		90.5±0.2	(298)	C	[91/2]
	(461–506)	85.5			[91/2]
	(387–502)	62.7	(402)		[89/32]
	(314–373)	94.7	(344)	GS	[87/4]
	(288–318)	101.3	(303)	GS	[97/40]
	(312–337)	79.5±12			[80/36]
	(369–397)	92±8.2		RG	[77/10]
	hexafluorobenzene				[49/3][70/1]
$\text{C}_6\text{F}_6$	(215–278)	49.2	(263)		[392-56-3]
	(238–268)	49.8	(253)	IPM,A	[87/4][65/22]
		46.0	(316)	B	[79/33]
$\text{C}_6\text{F}_{12}$	dodecafluorocyclohexane				[65/10]
	(252–326)	36.4	(267)		[355-68-0]
	(293–333)	36.2	(313)		[87/4][67/21]
$\text{C}_6\text{N}_2$	dicyanodiacylene	(dicyanobutadiyne)			[57/5]
	(294–335)	34.4	(309)		[16419-78-6]
	(295–335)	35.9	(315)		[87/4]
$\text{C}_6\text{N}_4$	tetracyanoethylene				[57/4]
	(290–312)	84.3	(302)	TE,ME	[670-54-2]
	(333–371)	81.2±5.9	(352)	MG	[83/7]
$\text{C}_6\text{N}_6\text{O}_3$		78.0		GS	[63/4][70/1]
	benzotrifurazan				[87/4]
	(303–333)	95.8±3.8			[58/14]
$\text{C}_6\text{N}_6\text{O}_6$	benzotrifuroxan				[99/44]
$\text{C}_6\text{HCl}_3\text{O}_2$	(363–433)	172.0±2.5			[99/44]
	trichloro-1,4-benzoquinone				[634-85-5]
	(301–327)	88.7±8.3		QF	[27/2][60/1]
$\text{C}_6\text{HCl}_5$	pentachlorobenzene				[70/1]
$\text{C}_6\text{HCl}_5\text{O}$		87.1±0.4	(298)	C	[608-93-5]
	pentachlorophenol				[91/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		$67.4 \pm 2.1$			[U/4][70/1]
$\text{C}_6\text{HF}_5\text{O}$	pentafluorophenol (273–299)	$67.4 \pm 1.7$		GS	[771-61-9] [69/5][70/1]
$\text{C}_6\text{H}_2\text{ClN}_3\text{O}_6$	1,3,5-trinitrochlorobenzene (341–363)	103.0	(352)	ME	[88-88-0] [50/2]
$\text{C}_6\text{H}_2\text{Cl}_2\text{O}_2$	2,6-dichloro-1,4-benzoquinone (274–315)	$69.9 \pm 8.3$		QF	[697-91-6] [27/2][60/1] [70/1]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,3,4-tetrachlorobenzene	$78.8 \pm 0.2$	(298)	C	[634-66-2] [91/2]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,4,5-tetrachlorobenzene	$83.2 \pm 0.3$	(298)	C	[95-94-3] [91/2]
$\text{C}_6\text{H}_2\text{Cl}_4$	1,2,3,5-tetrachlorobenzene	$79.6 \pm 0.3$	(298)	C	[634-90-2] [91/2]
$\text{C}_6\text{H}_2\text{Cl}_4\text{O}_2$	tetrachlorohydroquinone (298–359)	89	(313)		[87-87-6] [87/4]
	(333–356)	88.7		QF	[27/2][60/1]
$\text{C}_6\text{H}_3\text{Br}_3\text{O}$	2,4,6-tribromophenol	$97.6 \pm 1.1$			[118-79-6] [87/3]
$\text{C}_6\text{H}_3\text{ClN}_2\text{O}_2$	5-chlorobenzofurazan-1-oxide	$81.2 \pm 1.8$	(298)	C	[17348-69-5] [96/6]
$\text{C}_6\text{H}_3\text{ClO}_2$	chlorobenzoquinone (264–289)	$69.0 \pm 8.3$	(276)	QF	[695-99-8] [27/2][60/1] [70/1]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,2,3-trichlorobenzene (258–313)	72.7			[87-61-6] [94/39]
	(289–303)	$75.1 \pm 0.75$	(298)		[85/8]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,2,4-trichlorobenzene (279–298)	65.7	(296)	RG	[49/7][60/1] [120-82-1]
$\text{C}_6\text{H}_3\text{Cl}_3$	1,3,5-trichlorobenzene	62.3	(289)	RG	[49/7][60/1] [108-70-3]
	(282–301)	$72.7 \pm 0.5$	(298)		[85/8]
$\text{C}_6\text{H}_3\text{Cl}_3\text{O}_2$	trichlorohydroquinone (298–336)	56.5	(291)	RG	[49/7][60/1] [608-94-6]
	(314–335)	101.5	(313)		[87/4]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_4$	4-nitrobenzofurazan-1-oxide	101.3	(324)	QF	[27/2][60/1] [18771-85-2]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_6$	1,3,5-trinitrobenzene (313–395)	$97.3 \pm 1.6$	(298)	C	[96/6] [99-35-4]
	(353–395)	$107.3 \pm 0.6$	(298)	ME	[78/15]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_7$	picric acid (314–406)	$99.6 \pm 2.1$	(374)	ME	[50/2][70/1] [88-89-1]
$\text{C}_6\text{H}_3\text{N}_3\text{O}_8$	2,4,6-trinitroresorcinol (325–436)	$105.1 \pm 1.6$	(298)	ME	[78/15] [82-71-3]
$\text{C}_6\text{H}_4\text{BrCl}$	1,4-bromochlorobenzene	$120.8 \pm 1.1$	(298)	ME	[78/15] [106-39-8]
	(279–355)	69.3±0.1	(298)	DM	[00/31]
	(294–337)	69.3±0.4	(298)	ME,TE,DM	[98/13]
$\text{C}_6\text{H}_4\text{BrI}$	1,4-bromoiodobenzene	67.9±0.8	(316)		[61/2] [589-87-7]
	(279–355)	78.5±0.2	(298)	DM	[00/31]
$\text{C}_6\text{H}_4\text{BrNO}_2$	4-bromo-1-nitrobenzene (293–303)	78.5±0.4	(298)	ME,TE,DM	[98/13] [586-78-7]
$\text{C}_6\text{H}_4\text{Br}_2$	1,4-dibromobenzene	88.3	(303)	ME	[87/4][25/3] [106-37-6]
	(298–354)	74.2±0.1	(298)	ME	[00/31]
	(278–353)	73.2	(313)		[87/4]
	(228–347)	73.3±0.4	(326)		[61/2]
	(248–303)	73.8	(288)		[59/5]
$\text{C}_6\text{H}_4\text{Br}_3\text{N}$	2,4,6-tribromoaniline	59.8	(298)	ME,GS	[40/1][60/1] [147-82-0]
$\text{C}_6\text{H}_4\text{ClI}$	1,4-chloroiodobenzene	$101.1 \pm 1.1$			[87/3] [637-87-6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_4\text{ClNO}_2$		$71.9 \pm 0.2$	(298)	DM	[00/31]
	(259–320)	$71.9 \pm 0.4$	(298)	ME, TE, DM	[98/13]
	(303–323)	$61.1 \pm 0.6$			[53/8][60/1]
	3-chloro-1-nitrobenzene				[121-73-3]
$\text{C}_6\text{H}_4\text{ClNO}_2$	(275–286)	$74.7 \pm 1.7$			[35/1][38/1]
					[60/1]
$\text{C}_6\text{H}_4\text{ClNO}_2$	4-chloro-1-nitrobenzene				[100-00-5]
	(283–303)	83.2	(293)	ME	[87/4][25/3]
$\text{C}_6\text{H}_4\text{Cl}_2$	1,4-dichlorobenzene				[106-46-7]
		$64.8 \pm 0.2$	(298)	DM	[00/31]
	(258–313)	53.1			[94/39]
		$65.2 \pm 2.0$	(298)	C	[89/25]
	(303–423)	65.4	(313)	GS	[85/4]
		65.7			[81/12]
	(293–311)	$64.8 \pm 0.8$	(303)		[61/2][70/1]
	(311–325)	$63 \pm 0.4$	(318)		[61/2]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}$	(248–303)	56.9	(275)	ME	[40/1][60/1]
	2,3-dichlorophenol				[576-24-9]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}$		$71.7 \pm 2.2$	(298)	C	[94/5]
	2,4-dichlorophenol				[120-83-2]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}$	2,5-dichlorophenol				[94/5]
		$73.6 \pm 2.1$	(298)	C	[583-78-8]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}$	2,6-dichlorophenol				[94/5]
		$75.8 \pm 1.1$	(298)	C	[87-65-0]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}$	3,4-dichlorophenol				[94/5]
		$81.3 \pm 2.3$	(298)	C	[95-77-2]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}$	3,5-dichlorophenol				[591-35-5]
	(273–295)	$82.8 \pm 1.1$	(298)	C	[94/5]
$\text{C}_6\text{H}_4\text{Cl}_2\text{O}_2$	2,6-dichlorohydroquinone				[87/4]
	(324–345)	$92.0 \pm 8.3$		QF	[20103-10-0]
$\text{C}_6\text{H}_4\text{INO}_2$	3-iodo-1-nitrobenzene				[645-00-1]
	(295–306)	$83.2 \pm 1.2$	(300)		[35/1][38/1]
$\text{C}_6\text{H}_4\text{I}_2$	1,4-diiodobenzene				[624-38-4]
	(372–401)	63.4	(386.5)		[87/4]
$\text{C}_6\text{H}_4\text{N}_2$	2-cyanopyridine				[100-70-9]
		$70.7 \pm 1.2$	(298)	C	[84/6]
$\text{C}_6\text{H}_4\text{N}_2$	3-cyanopyridine				[100-54-9]
		$72.1 \pm 1.8$	(298)	C	[84/6]
$\text{C}_6\text{H}_4\text{N}_2$		79.0		DSC	[89/22]
	4-cyanopyridine				[100-48-1]
$\text{C}_6\text{H}_4\text{N}_2$		$73.2 \pm 0.6$	(298)	C	[84/6]
		75.6		DSC	[89/22]
$\text{C}_6\text{H}_4\text{N}_2\text{O}$	3-cyanopyridine N-oxide				[14906-64-0]
	(345–392)	$101.9 \pm 2.0$	(298)	ME	[98/12]
$\text{C}_6\text{H}_4\text{N}_2\text{O}$	4-cyanopyridine N-oxide				[14906-59-3]
	(345–392)	$104.4 \pm 4.3$	(298)	ME	[98/12]
$\text{C}_6\text{H}_4\text{N}_2\text{O}$	benzofurazan				[273-09-6]
		$64.4 \pm 1.6$	(298)	C	[90/29]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_2$		64.9	(298)		[80/6]
	benzofurazan N-oxide				[480-96-6]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_3$		$79.6 \pm 1.7$	(298)	C	[90/29]
	1-nitro-2-nitrosobenzene (dimer)				[612-29-3]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_4$	(323–343)	95.5	(333)		[87/4][74/34]
	1,2-dinitrobenzene				[528-29-0]
		$95.5 \pm 0.9$	(298)		[97/30]
	(343–377)	82.9	(358)	TE	[87/4][76/1]
	(343–397)	$81.8 \pm 2.3$	(370)	TE	[76/1]
	(343–397)	$87.9 \pm 2.1$	(298)	TE	[76/1]
	(328–338)	$86.6 \pm 1.2$	(333)		[35/1][38/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_4\text{N}_2\text{O}_4$	1,3-dinitrobenzene				[60/1]
	(335–356)	76.1	(345.5)		[99-65-0]
	(332–383)	84.2±1.9	(357)	TE	[87/4]
	(332–383)	87.0±0.8	(298)	TE	[76/1]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_4$	(315–329)	81.1±1.7	(323)		[76/1]
	1,4-dinitrobenzene				[35/1][38/1]
		94.3±0.7	(298)		[60/1][70/1]
	(339–398)	93.1±2.3	(368)	TE	[100-25-4]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_5$	(339–398)	96.2±2.5	(298)	TE	[76/1]
	(345–368)	89.1±1.7	(357)		[76/1]
	2,3-dinitrophenol				[35/1][38/1]
	(303–343)	96.6	(323)		[66-56-8]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_5$	2,4-dinitrophenol				[58/1]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_5$	(293–333)	104.6±4.2	(313)		[51-28-5]
	2,5-dinitrophenol				[58/1][70/1]
	(278–333)	93.4	(306)		[329-71-5]
	2,6-dinitrophenol				[58/1]
$\text{C}_6\text{H}_4\text{N}_2\text{O}_5$	(293–333)	112.1±4.2	(313)		[573-56-8]
	3,4-dinitrophenol				[58/1][70/1]
	(328–383)	123.5	(355)		[577-71-9]
	2,1,3-benzothiadiazole				[58/1]
$\text{C}_6\text{H}_4\text{N}_2\text{S}$		70.73±0.2	(298)	C	[273-13-2]
$\text{C}_6\text{H}_4\text{N}_4\text{O}_6$	2,4,6-trinitroaniline				[98/2]
	(328–371)	115.9	(343)	LE	[489-98-5]
	(326–449)	125.3±0.8	(298)	ME	[87/4][69/12]
	1,4-benzoquinone				[78/15]
$\text{C}_6\text{H}_4\text{O}_2$		68.0±0.5	(262)	ME,TE	[106-51-4]
		62.8±3.3			[81/4]
		68.5±0.6			[56/5][77/1]
	(260–278)	62.8	(269)	QF	[53/10]
$(\text{C}_6\text{H}_4\text{O}_2)-(\text{C}_6\text{H}_6\text{O}_2)$	quinhydron (quinone-hydroquinone)				[27/2]
		89.1	(325.5)		[106-34-3]
	(317–334)	88.6±1	(313)	ME,TE	[87/4]
	(300–325)	U 181.2			[81/4]
$\text{C}_6\text{H}_4\text{O}_5$	NA				[53/10][60/1]
	furan-2,5-dicarboxylic acid				[51/6]
	(378–402)	121.3	(391)	TE,ME	[3238-40-2]
	tetrathiofulvalene				[83/5]
$\text{C}_6\text{H}_4\text{S}_4$		61.0		TGA	[31366-25-3]
		95.3±1	(345)	TE,ME	[95/35]
	(341–361)	92±6.3	(351)	HSA	[80/22]
	(tetrathiofulvalene)-(7,7,8,8-tetracyanoquinodimethane)				[79/7]
$(\text{C}_6\text{H}_4\text{S}_4)-(\text{C}_{12}\text{H}_4\text{N}_4)$	(TTF–TCNQ)				[40210-84-2]
		130±2	(410)	TE,ME	[80/22]
	1-bromo-4-chlorobenzene				[106-39-8]
	(250–335)	69.3±0.4	(298)	TE,ME,DM	[98/13]
$\text{C}_6\text{H}_5\text{BrCl}$		69.1±0.2	(298)		[98/13]
	4-bromophenol				[106-41-2]
	(260–302)	87.3±0.4	(298)	ME	[71/8]
	3-chlorophenol				[108-43-0]
$\text{C}_6\text{H}_5\text{ClO}$	53.1				[38/1][60/1]
	4-chlorophenol				[70/1]
	(252–293)	60.8	(278)		[106-48-9]
		51.9			[87/4]
$\text{C}_6\text{H}_5\text{ClO}_2$	chlorohydroquinone				[38/1][60/1]
	(306–334)	102.9±8.3	(320)	QF	[70/1]
					[615-67-8]
					[27/2][60/1]
					[70/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_5\text{I}$	iodobenzene				[591-50-4]
	(243–255)	43.1			[60/1]
$\text{C}_6\text{H}_5\text{NO}$	(248–303)	40.0	(275)	ME	[40/1]
	nitrosobenzene (dimer)				[586-96-9]
$\text{C}_6\text{H}_5\text{NO}_2$	(297–339)	85.1	(312)		[87/4][74/34]
		80.8			[30/3]
$\text{C}_6\text{H}_5\text{NO}_2$	2-pyridinecarboxylic acid				[98-98-6]
	(345–392)	91.0±0.5 92.7±0.5 98.0±2.3	(329) (298) (298)	C ME	[99/9] [99/9] [98/12]
$\text{C}_6\text{H}_5\text{NO}_2$	3-pyridinecarboxylic acid				[59-67-6]
	(352–360)	123.9±3.7 101.1±0.6 105.2±0.6 123.4±1.2	(298) (362) (298) (298)	ME C	[00/3] [99/9] [99/9] [84/6]
$\text{C}_6\text{H}_5\text{NO}_2$	4-pyridinecarboxylic acid				[55-22-1]
	(345–392)	107.7±0.7 111.3±0.6 113.9±4.7	(362) (298) (298)	C ME	[99/9] [99/9] [98/12]
$\text{C}_6\text{H}_5\text{NO}_3$	2-nitrophenol				[88-75-5]
	(273–292)	73.3	(298)	C	[94/28]
$\text{C}_6\text{H}_5\text{NO}_3$	(298–310)	54.8	(282.5)		[87/4] [35/1][38/1]
		73.2±1.3			[60/1]
$\text{C}_6\text{H}_5\text{NO}_3$	3-nitrophenol				[554-84-7]
	(305–334)	91.2±0.5 98.5±0.6 100.2±0.6	(298) (321) (298)	C ME	[94/28] [92/13] [92/13]
$\text{C}_6\text{H}_5\text{NO}_3$	(325–336)	76.2	(319.5)		[87/4] [35/1][38/1]
		91.6±1.7			[60/1]
$\text{C}_6\text{H}_5\text{NO}_3$	4-nitrophenol				[100-02-7]
	(305–352)	92.4 98.8±1 91.2±1.7	(298) (298) (298)	C ME	[94/28] [71/8] [35/1][38/1]
$\text{C}_6\text{H}_5\text{NO}_3$	pyridine-2-carboxylic acid N-oxide				[824-40-8]
	(345–392)	94.4±4.0	(298)	ME	[98/12]
$\text{C}_6\text{H}_5\text{NO}_3$	pyridine-3-carboxylic acid N-oxide				[2398-81-4]
		152.3±1.9	(298)	ME	[95/3][95/11]
$\text{C}_6\text{H}_5\text{NO}_3$	pyridine-4-carboxylic acid N-oxide				[13602-12-5]
	(345–392)	136.1±1.2	(298)	ME	[98/12]
$\text{C}_6\text{H}_5\text{NO}_4$	2-nitro-1,3-dihydroxybenzene				[601-89-8]
	(253–293)	74.5	(273)		[58/1]
$\text{C}_6\text{H}_5\text{NO}_4$	4-nitrocatechol				[3316-09-4]
		121.1±1.4		C	[86/3]
$\text{C}_6\text{H}_5\text{NO}_5$	methyl 5-nitro-2-furancarboxylate				[1874-23-3]
		104.2±2.1			[80/28][86/5]
$\text{C}_6\text{H}_5\text{N}_3$	1-H-benzotriazole				[95-14-7]
	(327–345)	98.2±0.7 98.8 99.0±0.5	(298) (336) (298)	C ME ME	[99/8] [89/8] [89/8]
$\text{C}_6\text{H}_5\text{N}_5\text{O}_6$	1,3-diamino-2,4,6-trinitrobenzene				[28930-29-2]
	(335–382)	140 143.5	(350) (298)	LE	[87/4][69/12] [78/15]
$\text{C}_6\text{H}_6$	benzene				[71-43-2]
	(258–273)	41.7			[94/39]
$\text{C}_6\text{H}_6$	(223–279)	45.2	(264)	BG	[87/4][76/23]
		44.6	(298)	H	
$\text{C}_6\text{H}_6$		45.1	(278)		[84/21]
		44.8	(298)	H	
$\text{C}_6\text{H}_6$	(183–197)	44.4	(298)	TE,ME	[80/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_6$	(221–268)	53.9±0.8	(193)		[77/4]
		49.4±0.4	(193)		[77/4]
		45.6	(279)	MM	[74/22]
		44.1	(261)		[60/1]
		43.1	(229)		[60/1]
	(263–270)	44.6	(279)		[56/8]
		46.6	(282)	A	[47/2]
	(184–200) (214–238)	44.6	(273)		[36/3][74/22]
		U33.2	(192)		[33/4]
		43.3	(226)	A	[13/1]
$\text{C}_6\text{H}_6\text{ClN}$	2,4-hexadiyne				[2809-69-0]
	(282–333)	47±2	(307)	MM	[82/11]
	solid phase transition	1.0	(118)		[82/11]
$\text{C}_6\text{H}_6\text{Cl}_6$	4-chloroaniline				[106-47-8]
	(283–303)	90.7	(293)	ME	[87/4][25/3]
	$\alpha$ -hexachlorocyclohexane (melting point 160 °C)				[319-84-6]
	(313–363)	95.7	(328)		[87/4][60/1]
$\text{C}_6\text{H}_6\text{Cl}_6$	(324–344)	92.9	(334)	TE	[47/1]
	$\beta$ -hexachlorocyclohexane (melting point 314 °C)				[319-85-7]
	(506–551)	103.7			[89/32]
	(313–363)	107	(328)		[87/4][60/1]
	(368–390)	102.9	(379)	TE	[47/1]
$\text{C}_6\text{H}_6\text{Cl}_6$	$\gamma$ -hexachlorocyclohexane (melting point 114 °C)				[58-89-9]
	(310–384)	92.4±4.0	(298)	ME,TE	[98/15]
	(292–326)	97.7±0.6	(308)	ME	[96/12]
	(243–303)	106.6±0.9	(273)	GS	[94/1]
		90.1±0.7	(338)	C	[91/5]
		90.8±0.7	(298)	C	[91/5]
	(313–358)	70.5	(335)		[90/26]
	(313–363)	99.2	(328)		[87/4][60/1]
	(293–313)	88.9	(303)	GS	[83/5][70/8]
	(293–313)	101.2	(303)		[70/8]
$\text{C}_6\text{H}_6\text{Cl}_6$	(313–343)	89.7	(328)		[60/12]
	(333–365)	115.5		TE	[47/1]
	$\delta$ -hexachlorocyclohexane (melting point 142 °C)				[319-86-8]
	(313–363)	97.3	(328)		[87/4][60/1]
	(328–358)	97.5			[47/1]
$\text{C}_6\text{H}_6\text{F}_8\text{O}_2$	2,2,3,3,4,5,5-octafluoro-1,6-hexanediol	89.2±8.4			[355-74-8]
					[74/18][77/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}$	2-pyridinecarboxamide	93.1±3.3	(298)	C	[01/1]
	(323–373)	93.1	(338)	ME	[87/4][60/16]
$\text{C}_6\text{H}_6\text{N}_2\text{O}$	3-pyridinecarboxamide	121.2±3.3	(298)	C	[01/1]
	(363–393)	111.8	(378)	ME	[87/4][60/16]
$\text{C}_6\text{H}_6\text{N}_2\text{O}$	4-pyridinecarboxamide	116.1±1.5	(298)	C	[01/1]
	(383–412)	99.9	(397.5)	ME	[87/4][60/16]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	3-pyridinecarboxamide N-oxide				[1986-81-8]
	(413–430)	119.2±2.3	(298)	ME	[01/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	4-pyridinecarboxamide N-oxide				[38557-82-3]
	(409–430)	125.3±1.8	(298)	ME	[01/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	2-nitroaniline				[88-74-4]
		90±3.0		ME,TE	[85/7]
		82.4±2	(313)		[38/1][60/1]
	(310–319)	90±4.2			[35/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$		79.9±1.7			[58/1][70/1]
		89.0±0.7	(298)		[34/1]
	2-methyl-5-pyrazine carboxylic acid				[97/30]
					[5521-55-1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	3-nitroaniline	100.9±1.5	(298)	C	[97/25] [99-09-2]
		108.3±3		ME,TE	[85/7]
	(320–384)	93.6±0.7	(351)	ME	[73/5]
	(320–384)	94.6±0.3	(351)	C	[73/5]
		96.5±0.3	(298)	C	[73/5]
	(288–343)	97.6	(316)	ME	[58/1][70/1]
	(332–341)	88.3±1.7		TE	[34/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_2$	(332–341)	88.7±2.5			[38/1][60/1] [35/1]
	4-nitroaniline				[100-01-6]
		101.4±1.3	(298)	ME	[90/2]
		101.5±1.7	(298)	TE	[90/2]
		94.6		GS	[87/19][91/18]
		107±3		ME,TE	[85/7]
		100.4±2.1	(298)	ME	[77/28][90/2]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_3$	(351–417)	100.9±0.6	(298)	ME	[73/5]
	(303–363)	109.3	(333)	ME	[58/1][70/1]
		99.3±1.7	(298)	ME	[56/2]
	(346–366)	97.5±1.7	(356)	ME	[56/2]
		100.7±2.5	(298)	TE	[38/1]
		98.7±2.5	(361)	TE	[38/1][60/1]
	(357–367)	103.3±1.7	(362)		[34/1]
$\text{C}_6\text{H}_6\text{N}_2\text{O}_3$	3-methyl-4-nitropyridine N-oxide				[1074-98-2]
	(345–392)	106.7±2.0	(298)	ME	[98/12]
$\text{C}_6\text{H}_6\text{N}_4\text{O}$	7-methylhypoxanthine	100.4±13			[1006-08-02] [78/17]
$\text{C}_6\text{H}_6\text{N}_4\text{O}$	9-methylhypoxanthine				[875-31-0]
	(500–552)	84		HSA	[65/2]
$\text{C}_6\text{H}_6\text{N}_6\text{O}_6$	2,4,6-trinitro-1,3,5-benzenetriamine				[3058-38-6]
	(402–451)	168.2	(417)	LE	[87/4][69/12]
$\text{C}_6\text{H}_6\text{O}$	phenol				[108-95-2]
	(263–298)	65.3±3.3	(280)	HSA	[75/3]
	(230–273)	69.7±0.9	(298)	ME	[71/8]
	(282–313)	68.7±0.5		GS	[60/3][70/1]
	(283–303)	68.2	(293)	ME	[58/18]
	(270–313)	68.1	(292)		[48/5]
	(278–305)	67.8		TE	[47/1][60/1]
$\text{C}_6\text{H}_6\text{O}_2$	1,2-dihydroxybenzene				[120-80-9]
		87.5±0.3	(298)	C	[91/7]
		86.6±1.6	(298)	C	[84/20]
		80.8			[38/1][60/1] [35/1]
	1,3-dihydroxybenzene				[108-46-3]
		85.3±0.5	(334)	C	[91/7]
		87.5±0.5	(298)	C	[91/7]
$\text{C}_6\text{H}_6\text{O}_2$	(328–379)	92.7	(353)	GS	[83/3]
	(324–335)	93.3±2.1			[68/4]
	(283–323)	93.4	(303)		[58/1]
		95.4±1.7			[38/1][60/1] [35/1]
	1,4-dihydroxybenzene				[123-31-9]
		94.1±0.5	(298)	C	[91/7]
		93.7±0.5	(334)	C	[91/7]
$(\text{C}_6\text{H}_6\text{O}_2)_-$ $(\text{C}_{10}\text{H}_8\text{O}_2)$	(341–400)	101.7	(370)	GS	[83/3]
		103.9±1	(342)	ME,TE	[81/4]
	(298–346)	103.8	(313)		[56/5]
		90.1±0.8			[53/10]
	(326–345)	103.8		QF	[27/2]
	1,4-hydroquinone-1,4-naphthoquinone				[60706-28-7]
		98.7±1	(324)	TE,ME	[81/4]
$\text{C}_6\text{H}_6\text{O}_3$	1,2,3-trihydroxybenzene				[87-66-1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_6\text{O}_3$	(377–398) 1,2,4-trihydroxybenzene	116.9±0.6 89.1	(298) (387)	C	[86/3] [34/2] [533-73-3]
		119.8±1.6	(298)	C	[86/3] [108-73-6]
$\text{C}_6\text{H}_6\text{O}_3$	(383–406) 1,3,5-trihydroxybenzene	131.7±1.0 127.9	(298)	C TE,ME	[86/3] [83/23] [137-04-2]
		77.6	(388)		[87/4][75/31]
$\text{C}_6\text{H}_7\text{Cl}_2\text{N}$	2-chloroaniline hydrochloride (373–473)	71.3	(398)		[141-85-5]
		77.8	(388)		[87/4][75/31] [20265-96-7]
$\text{C}_6\text{H}_7\text{Cl}_2\text{N}$	3-chloroaniline hydrochloride (383–473)	120.4±3.8	(356)	TE	[02/1] [400-58-8]
		67	(288)		[87/4][60/20]
$\text{C}_6\text{H}_7\text{N}$	3-methylpyridine (225–255)	62.2	(240)	RG,ME	[108-99-6] [87/4][51/5]
		62.7	(243)	RG,ME	[108-89-4] [87/4][51/5]
$(\text{C}_6\text{H}_7\text{N})-(\text{SO}_2)$	aniline–sulfur dioxide complex (277–323)	82.1	(300)		[31/2] [95-55-6]
		93.5±0.8 95.3±0.7 96.9±0.6 103.9±0.9	(332) (337) (298) (298)	C	[96/18] [96/18] [96/18] [86/11]
$\text{C}_6\text{H}_7\text{NO}$	3-aminophenol	98.8±0.9 101.6±0.9 104.7±1.2	(335) (298) (298)	C	[96/18] [96/18] [86/11]
		101.1±0.7 103.6±0.7 111 109.1±1.4	(335) (298) (438) (298)	C	[96/18] [96/18] [87/4] [86/11]
$\text{C}_6\text{H}_7\text{NO}$	4-aminophenol	92.1	(417)	I	[54/8][60/1]
		89.3±1.3	(298)	C	[1121-25-1] [82/15][86/5]
$\text{C}_6\text{H}_7\text{NO}$	2-methyl-4-hydroxypyridine	113.0±1.3	(298)	C	[18617-86-6] [82/15][86/5]
		96.2±2.1	(298)	C	[1121-78-4] [82/15][86/5]
$\text{C}_6\text{H}_7\text{NO}$	2-methyl-5-hydroxypyridine	92.0±1.3	(298)	C	[3279-76-3] [82/15][86/5]
		78.2±2.2	(298)	C	[931-19-1] [95/3]
$\text{C}_6\text{H}_7\text{NO}$	2-methylpyridine N-oxide	82.2±2.4	(298)	C	[1003-73-2] [95/3]
		85.3±2.6 79.1±1.3	(298)	ME	[1003-67-4] [98/12] [95/31]
$\text{C}_6\text{H}_7\text{NO}_3\text{S}$	sulfanilic acid (4-aminobenzene sulfonic acid)	66.9			[121-57-3] [38/1][60/1]
		75.3±3.8	(365)	B	[22581-72-2] [74/21]
$\text{C}_6\text{H}_7\text{NS}$	4-methylthiopyridine (347–383)	188.3±9.2	(452)	B	[6887-59-8] [74/21]
		138.2		ME	[5142-22-3] [00/17]
$\text{C}_6\text{H}_7\text{N}_5$	1-methyladenine 2-methyladenine	121.7		ME	[1445-08-5] [00/17]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_7\text{N}_5$	3-methyladenine	117.5 83.7±9		ME HSA	[5142-23-4] [00/17] [78/17]
$\text{C}_6\text{H}_7\text{N}_5$	8-methyladenine	103.2		ME	[22387-37-7] [00/17]
$\text{C}_6\text{H}_7\text{N}_5$	9-methyladenine (413–458)	121.7 92±8	(428)	HSA HSA	[700-00-5] [87/4][65/2] [78/17]
$\text{C}_6\text{H}_8\text{ClN}$	aniline hydrochloride (383–471)	87.5	(398)		[142-04-1] [87/4][75/31]
$\text{C}_6\text{H}_8\text{N}_2$	1,2-diaminobenzene	85.5±0.3	(298)	C	[95-54-5] [97/26]
$\text{C}_6\text{H}_8\text{N}_2$	1,3-diaminobenzene	90.4±0.4	(298)	C	[108-45-2] [97/26]
$\text{C}_6\text{H}_8\text{N}_2$	1,4-diaminobenzene	92.2±0.2	(298)	C	[106-50-3] [97/26]
$\text{C}_6\text{H}_8\text{N}_2\text{O}_2$	1,3-dimethyluracil (311–367)	115.8±3.0	(338)	TE	[874-14-6] [00/2]
	(340–369)	96.9±1.2	(298)	C	[89/17]
		96.4±1.4	(298)	C	[85/5]
	(313–363)	101.7±2.1	(338)	QR	[80/19]
	(400–454)	46±4.2	(426)	HSA	[78/17]
		77.0±1.2		ME	[72/32][00/2]
	(344–370)	92	(352)	HSA	[65/2]
$\text{C}_6\text{H}_8\text{N}_2\text{O}_2$	1-methylthymine (378–428)	124.4±1.3	(398)	QR	[4160-72-9] [80/19]
$\text{C}_6\text{H}_8\text{O}_2$	1,3-cyclohexanedione	89.8±1.1	(298)	C	[504-02-9] [93/23]
$\text{C}_6\text{H}_8\text{O}_2$	1,4-cyclohexanedione	75.0±1.0 84.4 84.2	(298) (289) (298)	C TE,ME	[637-88-7] [93/23] [83/7] [83/7]
$\text{C}_6\text{H}_8\text{O}_4$	dimethyl fumarate	NA 84.5±1.7			[624-49-7] [72/7] [34/1]
$\text{C}_6\text{H}_8\text{O}_4$	dimethyl maleate	44.8			[624-48-6] [38/1][60/1] [35/1]
	(317–341)	41.8±4.2			[34/1]
$\text{C}_6\text{H}_8\text{O}_4$	cyclobutane-1,1-dicarboxylic acid	112.2±0.7		C	[5445-51-2] [83/26]
$\text{C}_6\text{H}_8\text{O}_4$	cyclobutane-1,2-dicarboxylic acid	120.0±0.9		C	[3396-14-3] [83/26]
$\text{C}_6\text{H}_9\text{N}_3\text{O}$	1,3,5-trimethyl-4-nitrosopyrazole	88.0±2.0	(298)	C	[7171-70-2] [01/4]
$\text{C}_6\text{H}_9\text{N}_3\text{O}$	1,5-dimethylcytosine (390–437)	132.8±0.6		GS	[17634-60-5] [98/37]
$\text{C}_6\text{H}_9\text{N}_3\text{O}$	1,N-dimethylcytosine (401–426)	122.2±0.3		GS	[6220-49-1] [98/37]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_2$	L-histidine (392–492)	142±8	(442)	LE	[71-00-1] [77/2]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_2$	1-methyl-4N-methoxycytosine (316–325)	107.6±0.3		ME	[99/42]
	(320–357)	106.9±0.4		GS	[99/42]
		106.4±0.8			[98/37]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_2$	1,5-dimethyl-N-hydroxycytosine (357–394)	115.2±0.6		GS	[6220-53-7] [98/37]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_3$	trimethyl isocyanurate (330–346)	86.6±1.3 88.2±1.3 88.2±1.3	(338) (298) (298)	C C C	[827-16-7] [88/12] [88/12] [89/17][85/5]
$\text{C}_6\text{H}_9\text{N}_3\text{O}_3$	trimethyl cyanurate (331–360)	90.3±1.0	(298)	C	[877-89-4] [89/17][85/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	CAS registry number
Polymorph	Temperature range (K)			Reference
$\text{C}_6\text{H}_{10}\text{N}_6\text{O}_9$	N-(2,2-dinitropropyl)-2,2-dinitro-N-nitroso-1-propanamine (323–336)	110.9±8		[28464-26-8] [73/12][77/1]
$\text{C}_6\text{H}_{10}\text{N}_6\text{O}_{10}$	N-(2,2-dinitropropyl)-2,2-dinitro-N-nitro-1-propanamine (398–423)	99.2±0.8		[28464-24-6] [73/12]
$\text{C}_6\text{H}_{10}\text{O}$ crystal III crystal III crystal II	1-methylcyclopentanol (253–281)	73.7±0.4 67.0±0.2 67.4±0.2	(267) (298) (291)	[1462-03-9] [97/4] [97/4] [97/4]
$\text{C}_6\text{H}_{10}\text{O}$	cyclohexanone (243–265)	49.3	(254)	[108-94-1] [48/5]
$\text{C}_6\text{H}_{10}\text{O}_3$	4-methyl-2,6,7-trioxabicyclo[2.2.2]octane	67.4	(298)	[766-32-5] [95/28]
$\text{C}_6\text{H}_{10}\text{O}_4$	1,6-hexanedioic acid (adipic acid)	NA (295–318)		[124-04-9] [01/19] [01/15]
		140 133.6±1.3 129.3±2.5	(298) (383)	[99/10][60/4] [50/4][60/1] [70/1]
		U37.2	(306)	A [47/6]
$\text{C}_6\text{H}_{10}\text{O}_4$	cis-1,3,5,7-tetraoxadecalin	94.9	(298)	[75096-35-4] or [54933-94-7] [98/19]
$\text{C}_6\text{H}_{10}\text{O}_4$	trans-1,3,5,7-tetraoxadecalin	81.5	(298)	[75096-35-4] or [54933-94-7] [98/19]
$\text{C}_6\text{H}_{10}\text{O}_5$	1,6-anhydro- $\beta$ -D-glucose (344–386)	125.1±1.0	(365)	[498-07-7] [99/1]
	(386–405)	100.3±5.9	(395)	[99/1]
$\text{C}_6\text{H}_{10}\text{O}_6$	(dl)-dimethyl tartrate (314–339)	112±5.6	(326)	[608-69-5] [81/8]
	(315–358)	113.8	(336)	[54/5][77/1] [38/1][60/1] [37/6]
		U 95.0		
		U 92.5		
$\text{C}_6\text{H}_{10}\text{O}_6$	(d)-dimethyl tartrate (310–320)	77.4±8	(315)	HSA [5057-96-5] [81/8]
	(308–317)	U 113 88.3 85.8	(312)	[54/5][77/1] [38/1][60/1] [37/6]
$\text{C}_6\text{H}_{10}\text{O}_6$	meso-dimethyl tartrate	98.3 95.8		[38/1][60/1] [37/6]
$\text{C}_6\text{H}_{11}\text{NO}$	$\epsilon$ -caprolactam (330–340)	89.3±0.8 86.3±0.2 87.3±0.2	(335) (338) (298)	ME [502-44-3] [92/12] C [92/12] [92/12]
	(258–308)	77.5	(273)	[87/4] [53/5][60/1] [70/1][60/21]
	(294–314)	83.3±0.8		
$\text{C}_6\text{H}_{11}\text{NO}$	cyclohexanone oxime	74.0±0.3 79.9±0.7	(354) (317)	C [100-64-1] [92/6] ME [92/6]
$\text{C}_6\text{H}_{11}\text{NO}$	cis 2-hexenoic acid amide (323–333)	80	(328)	[820-99-5] [87/4]
$\text{C}_6\text{H}_{11}\text{NO}$	trans 2-hexenoic acid amide (353–393)	55.8	(368)	[820-99-5] [87/4]
$\text{C}_6\text{H}_{11}\text{NO}_2$	1-amino-1-cyclopentanecarboxylic acid	123.4±4	(455)	[52-52-8] [65/1][64/16]
$\text{C}_6\text{H}_{11}\text{N}_3\text{O}_6$	2,3,3-trinitro-2-methylpentane	90.8	(298)	[62154-78-3] [99/35]
$\text{C}_6\text{H}_{11}\text{N}_5\text{O}_8$	N-(2,2-dinitropropyl)-2,2-dinitro-1-propanamine	105.4±4.2		[1924-47-6] [73/1][77/1]
$\text{C}_6\text{H}_{11}\text{NS}$	1-methyl-2-thiopiperidone (363–370)	81.2±2.9	(366)	[13070-07-0] [74/21]
$\text{C}_6\text{H}_{12}$	cyclohexane (223–280)	37.6	(265)	[110-82-7] [87/4][76/23]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		36.4±0.7	(279.9)	B	[74/22]
		46.6	(186)	B	[63/6]
	(268–278)	37.2	(273)		[60/1]
	(228–268)	37.7	(248)	A	[47/2]
	(269–279)	36.5	(274)	A	[34/4]
	solid phase transition	6.73	(186)		[84/25]
C <sub>6</sub> H <sub>12</sub> N <sub>2</sub>	1,4-diazabicyclo[2.2.2]octane				[280-57-9]
	(324–351)	61.9±3.3	(338)		[60/5][70/1]
	(353–369)	52.3±3.3	(361)		[60/5][70/1]
	(323–373)	54.4	(348)		[63/6]
C <sub>6</sub> H <sub>12</sub> N <sub>2</sub>	3,3,4,4-tetramethyl-Δ <sup>1</sup> -1,2-diazetine	62.3±1.0	(298)	C	[78/34]
C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>4</sub>	2,3-dinitro-2,3-dimethylbutane	79.5±0.8	(298)		[3964-18-9]
C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> O <sub>6</sub>	2,5-hexanediol dinitrate				[42730-17-6]
	(293–313)	119	(303)		[87/4][57/7]
C <sub>6</sub> H <sub>12</sub> N <sub>4</sub>	1,3,5,7-tetraazatricyclo[3.3.1.1 <sup>3,7</sup> ]-decane				[100-97-0]
	(298–453)	76.8	(313)		[87/4]
	(302–328)	78.8	(316)	TE,ME	[83/7]
		74.9±2.9	(298)		[60/5][70/2]
	(281–298)	74.1±0.8	(289)	TE	[60/2]
		75.3			[58/6]
C <sub>6</sub> H <sub>12</sub> O	cyclohexanol				[108-93-0]
	(272–298)	60.7	(285)		[87/4][48/5]
C <sub>6</sub> H <sub>12</sub> O <sub>2</sub>	cis 1,2-cyclohexanediol				[1792-81-0]
		89.0			[99/30]
crystal I		70±3.0	(366)	C	[95/17]
crystal III		88.0±1.9	(343)	C	[95/17]
	(289–320)	43.7	(304)	ME	[87/4][40/1]
C <sub>6</sub> H <sub>12</sub> O <sub>2</sub>	trans 1,2-cyclohexanediol				[1460-57-7]
		85.9±1.4	(343)	C	[95/17]
	(289–320)	42.5	(304)	ME	[87/4][40/1]
C <sub>6</sub> H <sub>12</sub> O <sub>6</sub>	myo-inositol				[87-89-8]
		181			[99/30]
		154.7±1.4	(477)	TE	[90/7]
		161	(298)		[90/7]
		178	(298)	B	[90/7]
		168			[83/23]
C <sub>6</sub> H <sub>13</sub> ClO <sub>2</sub> S	1-hexanesulfonyl chloride				[14532-24-2]
	(273–303)	60.7 (liq)	(288)		[87/4][63/11]
C <sub>6</sub> H <sub>13</sub> NO	tert-butylacetamide				[762-84-5]
	(278–295)	78.3±0.3	(287)	ME	[83/13]
		77.9±0.4	(298)		[83/13]
C <sub>6</sub> H <sub>13</sub> NO	hexanamide				[628-02-4]
	(301–371)	85±4.0	(298)	TE	[00/1]
	(293–303)	98.7±1.7	(298)		[73/19][77/1]
	(338–368)	95.1±4	(353)	GS	[59/3][70/1]
					[87/4]
C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub>	(dl)-2-aminohexanoic acid				[616-06-8]
	(435–469)	114.5±0.4	(450)	ME	[65/1][64/16]
					[87/4]
C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub>	2-amino-3-methylpentanoic acid				[3107-04-8]
		120.1±0.8	(455)	ME	[65/1][64/16]
C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub>	L-(d)-2-amino-4-methylpentanoic acid (L-(d)-leucine)				[328-38-1]
	(323–423)	U 83.7±4	(373)	LE	[77/2]
C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub>	D-(l)-leucine				[61-90-5]
	(446–464)	150.6±0.8	(455)	ME	[65/1][70/1]
					[64/16]
C <sub>6</sub> H <sub>13</sub> NO <sub>2</sub>	6-aminohexanoic acid				[60-32-2]
	(388–407)	153.3±0.8	(398)	C	[83/24]
		155±3	(298)	C	[83/24]
C <sub>6</sub> H <sub>14</sub>	n-hexane	50.8	(178)	B	[110-54-3]
					[63/6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_6\text{H}_{14}\text{N}_2\text{O}_2$	L-lysine (397–497)	$U\ 88 \pm 8$	(447)	LE	[56-87-1] [77/2]
$\text{C}_6\text{H}_{14}\text{N}_4\text{O}_2$	L-arginine (441–541)	$U\ 134 \pm 8$	(491)	LE	[74-79-3] [77/2]
$\text{C}_6\text{H}_{14}\text{O}_2$	1,6-hexanediol	$112.0 \pm 0.4$ $83.3 \pm 1.7$	(298)	C	[629-11-8] [90/14] [72/12][77/1]
$\text{C}_6\text{H}_{14}\text{O}_2\text{S}$	<i>tert</i> -butyl ethyl sulfone	$86.6 \pm 2.5$			[34008-94-1] [U/3][70/1]
$\text{C}_6\text{H}_{14}\text{O}_6$	D-mannitol	202	(298)	B	[69-65-8] [90/7]
$\text{C}_6\text{H}_{14}\text{O}_6$	D-sorbitol	186	(298)	B	[3615-56-3] [90/7]
$\text{C}_6\text{H}_{14}\text{O}_6$	D-galactitol	205	(298)	B	[608-66-2] [90/7]
$\text{C}_6\text{H}_{16}\text{N}_2\text{O}_2$	$N,N'$ -bis(2-hydroxyethyl)ethylenediamine	142.7	(373)	B	[4439-20-7] [97/39]
$\text{C}_6\text{H}_{16}\text{N}_2\text{O}_2$	diisopropyl ammonium nitrite (288–299)	39	(293.5)		[3129-93-9] [87/4][65/19]
$\text{C}_7\text{F}_{14}$	perfluoromethylcyclohexane	51.6	(234)	B	[355-02-2] [63/6][57/5]
$\text{C}_7\text{F}_{16}$	<i>n</i> -hexadecafluoroheptane	57.7		B	[335-57-9] [63/6][51/7]
$\text{C}_7\text{HF}_5\text{O}_2$	pentafluorobenzoic acid (335–359)	$91.6 \pm 4.2$		GS	[602-94-8] [69/5][70/1]
$\text{C}_7\text{H}_4\text{S}_3$	4,5-benzo-1,2-dithiole-3-thione (350–361)	$102.6 \pm 0.4$ $107 \pm 0.4$	(355) (298)		[3354-42-5] [72/16] [72/16]
$\text{C}_7\text{H}_4\text{S}_3$	4,5-benzo-1,3-dithiole-2-thione	$118.8 \pm 0.4$	(298)		[934-36-1] [73/16][77/1]
$\text{C}_7\text{H}_5\text{BrO}_2$	2-bromobenzoic acid	$95.9 \pm 0.4$ $110.9 \pm 1.1$ $83.3 \pm 0.4$	(298) (298) (298)	C C DSC	[88-65-3] [94/4] [87/8] [83/8]
$\text{C}_7\text{H}_5\text{BrO}_2$	3-bromobenzoic acid	$99.2 \pm 0.2$ $105.0 \pm 1.1$	(298) (298)	C C	[585-76-2] [94/4] [87/8]
$\text{C}_7\text{H}_5\text{BrO}_2$	4-bromobenzoic acid	$103.1 \pm 0.6$ $107.6 \pm 1.1$	(298) (298)	C C	[586-76-5] [94/4] [87/8]
$\text{C}_7\text{H}_5\text{ClO}_2$	2-chlorobenzoic acid	$100.9 \pm 0.5$ $116.2 \pm 0.6$ $79.5 \pm 3.3$	(298) (298) (298)	C DSC	[118-91-2] [95/24] [83/8] [38/1][60/1] [70/1]
$\text{C}_7\text{H}_5\text{ClO}_2$	3-chlorobenzoic acid	$101.4 \pm 0.4$ 99.6 105.8 $80.8 \pm 3.3$	(298) (413) (298) (298)	C C C	[535-80-8] [95/24] [75/20] [75/20] [38/1][60/1] [70/1]
$\text{C}_7\text{H}_5\text{ClO}_2$	4-chlorobenzoic acid	$102.5 \pm 0.4$ 101.9 107.9 $87.9 \pm 3.3$	(298) (413) (298) (298)	C C C	[74-11-3] [95/24] [75/20] [75/20] [38/1][60/1] [70/1]
$\text{C}_7\text{H}_5\text{FO}_2$	2-fluorobenzoic acid (309–323)	$93.9 \pm 0.5$ $94.4 \pm 0.8$	(316) (298)	ME	[445-29-4] [00/5] [00/5]
$\text{C}_7\text{H}_5\text{FO}_2$	3-fluorobenzoic acid (303–317)	$93.3 \pm 0.5$ $93.6 \pm 0.6$	(310) (298)	ME	[455-38-9] [00/5] [00/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_7\text{H}_5\text{FO}_2$	4-fluorobenzoic acid (358–382)	$91.2 \pm 1.3$	(370)	GS	[456-22-4] [69/5][70/1] [87/4]
		$93.1 \pm 3.8$	(298)		[69/5][00/5] [88-67-5]
$\text{C}_7\text{H}_5\text{IO}_2$	2-iodobenzoic acid (345–359)	$111.4 \pm 0.8$	(352)	ME	[00/5]
		$112.8 \pm 2.0$	(298)		[00/5]
		$92.6 \pm 0.2$	(298)	C	[94/30][95/24]
		$103.0 \pm 0.4$	(298)	DSC	[83/8]
$\text{C}_7\text{H}_5\text{IO}_2$	3-iodobenzoic acid (347–363)	$109.6 \pm 0.5$	(355)	ME	[618-51-9] [00/5]
		$111.1 \pm 1.9$	(298)		[00/5]
		$96.4 \pm 0.3$	(298)	C	[94/30][95/24]
$\text{C}_7\text{H}_5\text{IO}_2$	4-iodobenzoic acid (363–379)	$111.0 \pm 0.4$	(372)	ME	[619-58-9] [00/5]
		$112.9 \pm 2.5$	(298)		[00/5]
		$99.3 \pm 0.4$	(298)	C	[94/30][95/24]
$\text{C}_7\text{H}_5\text{NO}$	benzoxazole	$69.5 \pm 0.4$	(298)	C	[273-53-0] [98/20]
$\text{C}_7\text{H}_5\text{NS}$	benzothiazole	$72.9 \pm 0.6$	(298)	B	[95-16-9] [98/20]
$\text{C}_7\text{H}_5\text{NO}_4$	3-(5-nitro-2-furyl)-2-propenal	$97.9 \pm 2.1$			[1874-22-2] [80/28][86/5]
$\text{C}_7\text{H}_5\text{NO}_4$	2-nitrobenzoic acid (346–356)	$115.8 \pm 0.5$	(356)	ME	[552-16-9] [99/31]
		$118.7 \pm 0.5$	(298)	ME	[99/31]
$\text{C}_7\text{H}_5\text{NO}_4$	3-nitrobenzoic acid (347–361)	$107.2 \pm 0.4$	(354)	ME	[121-92-6] [99/31]
		$110.0 \pm 0.4$	(298)	ME	[99/31]
$\text{C}_7\text{H}_5\text{NO}_4$	4-nitrobenzoic acid (367–381)	$115.4 \pm 0.6$	(374)	ME	[62-23-7] [99/31]
		$119.7 \pm 0.6$	(298)	ME	[99/31]
$\text{C}_7\text{H}_5\text{N}_3\text{O}_6$	2,4,6-trinitrotoluene (293–353)	112.4	(308)		[118-96-7] [87/4]
	(301–349)	$113.2 \pm 1.5$	(298)	ME	[78/15]
	(297–330)	99.2±2		GS	[76/3][77/5]
	(327–349)	$104.6 \pm 1.7$	(298)	ME	[71/4]
		$103.3 \pm 2.5$	(338)		[70/3]
		U122-132		TGA	[70/26][78/15]
	(323–353)	$118.4 \pm 4.2$		ME	[50/1][60/1] [70/1]
$\text{C}_7\text{H}_5\text{N}_3\text{O}_7$	(340–353)	102.2	(346)	ME	[50/2]
	2,4,6-trinitroanisole (334–342)	$132.4 \pm 2.1$	(338)	ME	[606-35-9] [87/4][70/1] [50/2]
$\text{C}_7\text{H}_5\text{N}_3\text{O}_7$	3-hydroxy-2,4,6-trinitrotoluene (310–365)	$111.2 \pm 2.1$	(298)		[602-99-3] [78/15]
	(325–350)	103.3	(337)		[70/3]
		104.6	(298)		[70/3]
$\text{C}_7\text{H}_5\text{N}_5\text{O}_8$	2,4,6-N-tetrinitro-N-methylaniline (335–416)	$133.8 \pm 1.6$	(298)	ME	[479-45-8] [78/15]
$\text{C}_7\text{H}_6\text{N}_2$	benzimidazole				[51-17-2]
		90.2±0.6	(363)	C	[98/6]
		94.3±0.6	(298)		[98/6]
	(340–359)	$101.8 \pm 0.4$	(350)	ME	[87/9]
		$102.2 \pm 0.4$	(298)	ME	[87/9]
$\text{C}_7\text{H}_6\text{N}_2$		98.9±0.4	(298)		[86/15]
	indazole (308–317)	$90.9 \pm 0.2$	(318)	ME	[271-44-3] [87/9]
		$91.1 \pm 0.2$	(298)		[87/9][86/15] [85/6]
		$87.7 \pm 0.9$			[61/3]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_2$	5-methoxybenzofuran	97.1			[4413-48-3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_7\text{H}_6\text{N}_2\text{O}_2$	5-methylbenzofurazan-1-oxide	$89.2 \pm 0.7$	(298)	C	[96/6] [19164-41-1]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$	5-methoxybenzofurazan-1-oxide	$92.2 \pm 1.2$	(298)	C	[96/6] [7791-49-3]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$	2-nitrobenzaldoxime	$96.0 \pm 1.6$	(298)	C	[96/6] [6635-41-2]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$ <i>anti</i>		$U 26.4 \pm 1.7$		MS	[83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$ <i>syn</i>		$U 40.2 \pm 1.7$		MS	[83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$ <i>anti</i>	3-nitrobenzaldoxime	$U 41.0 \pm 1.7$		MS	[3431-62-7] [83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$ <i>syn</i>		$U 42.7 \pm 1.7$		MS	[83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_3$ <i>anti</i>	4-nitrobenzaldoxime	$U 56.4 \pm 1.7$		MS	[1129-37-9] [83/9]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	1,1-dinitrophenylmethane (312–323)	$76.1 \pm 0.8$		ME	[25321-14-6] [72/6]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	2,4-dinitrotoluene (332–342)	$98.3 \pm 2.5$	(337)	ME	[77/1][70/3]
		$99.6 \pm 2.5$	(298)		[77/1][70/3]
	(277–344)	$95.8 \pm 1.25$	(310)	GS	[76/3][77/5]
		$99.6 \pm 1.3$		ME	[70/1][71/4]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	2,6-dinitrotoluene (277–323)	$98.3 \pm .8$	(300)	GS	[606-20-2] [76/3][77/5]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_4$	(dinitromethyl)benzene (312–323)	76.1	(317.5)		[611-38-1] [87/4]
$\text{C}_7\text{H}_6\text{N}_2\text{O}_5$	3,5-dinitro- <i>o</i> -cresol (290–324)	103.3		TE	[534-52-1] [47/1][60/1]
$\text{C}_7\text{H}_6\text{O}_2$	benzoic acid				[65-85-0]
	(323–394)	$88.3 \pm 0.5$	(298)	C	[01/5]
		$90.5 \pm 0.3$		GS	[99/42]
		$89 \pm 6$		TGA	[99/36]
		$87.5 \pm 0.4$			[98/38]
	(313–343)	86.7		TGA	[97/36]
	(307–314)	$88.7 \pm 0.9$	(311)	ME	[90/3]
		$89.3 \pm 0.9$	(298)		[90/3]
		$87.5 \pm 0.3$	(335)	C	[88/4]
		$89.2 \pm 1.0$	(298)		[88/4]
		$95.1 \pm 1.8$	(294)		[85/9]
	(293–319)	$90.8 \pm 0.6$	(306)	QR	[85/10]
		$89.5 \pm 0.4$		DSC	[83/8]
		$89.1 \pm 0.2$		C	[82/3]
	(316–391)	$89.5 \pm 0.5$	(353)	DM	[82/12]
	(293–313)	$90.6 \pm 2$		ME	[82/1]
		$93.45 \pm 1$		GS	[81/3]
	(328–398)	$U 133.5 \pm 4.5$		C	[80/20]
	(344–395)	$85 \pm 2$	(369)	SG	[80/30]
	(281–323)	$88.3 \pm 2.9$		LE	[78/17]
		$88.5 \pm 0.8$		C	[76/7]
	(294–331)	$92.5 \pm 4$		ME	[75/6]
	(293–318)	$88.5 \pm 1.6$		TE	[75/5]
	(273–318)	$92.9 \pm 0.2$	(296)	ME	[74/5]
	(293–311)	$88.1 \pm 0.2$		TCM	[73/1]
	(338–383)	$89.0 \pm 0.4$		ME	[73/2]
	(338–383)	$89.3 \pm 0.4$		C	[73/2]
	(290–315)	$86.6 \pm 1.3$		ME,C	[72/9]
	(293–308)	$90. \pm 0.3$		ME	[72/3]
		$89.5 \pm 0.2$	(298)	C	[72/1][71/6]
	(299–329)	89.1	(314)		[71/17]
	(290–315)	$86.6 \pm 1.7$	(303)	ME	[70/19][99/42]
	(324–392)	$90.4 \pm 0.8$	(367)	HSA	[70/9]
		$89.7 \pm 0.6$	(298)	C	[69/2]
	(348–378)	$88.9 \pm 0.5$	(363)	GS	[68/9]
	(291–307)	90.9	(299)	ME	[65/6]
	(243–387)	$91.5 \pm 0.5$	(298)	GS	[54/1][70/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_7\text{H}_6\text{O}_2$	(333–389)	84.2±0.8	(318)	TE	[60/1]
	(377–394)	85.8	(383)	T	[38/1]
	(377–394)	84.5±0.5	(364)	I	[34/2]
	4-hydroxybenzaldehyde				[27/3]
	(303–336)	98.2±1.3	(298)		[123-08-0]
	(312–336)	91.2	(324)		[87/4][71/8]
$\text{C}_7\text{H}_6\text{O}_2$	tropolone				[60/14]
	(273–333)	84.1±0.4		ME	[533-75-5]
$\text{C}_7\text{H}_6\text{O}_2$	3-(2-furyl)-2-propenal	83.7±0.8	(298)		[71/3]
		76.1±2.1			[51/4][70/1]
$\text{C}_7\text{H}_6\text{O}_3$	2-hydroxybenzoic acid				[623-30-3]
	(307–324)	95.1±0.5	(333)	C	[80/28][86/5]
	(312–332)	96.3±0.5	(298)		[69-72-7]
	(312–332)	95.7±0.8	(315)	ME	[93/22]
	(298–328)	94.9±0.4	(322)	TE	[77/4]
	(368–408)	93.22±0.8	(322)	ME	[77/4]
	(368–408)	99.2±2	(313)	ME	[74/5]
	(368–408)	94.8±0.4			[73/2]
	(368–408)	95.1±0.4		GS	[54/1][70/1]
$\text{C}_7\text{H}_6\text{O}_3$	3-hydroxybenzoic acid				[60/1]
		123.5±0.74	(363)	C	[99-06-9]
$\text{C}_7\text{H}_6\text{O}_3$	4-hydroxybenzoic acid	125.0±0.74	(298)		[93/22]
	(398–433)	112.4±0.7	(363)	C	[93/22]
		114.1±0.7	(298)		[93/22]
		116.3		GS	[99-96-7]
$\text{C}_7\text{H}_6\text{O}_4$	2,3-dihydroxybenzoic acid	116±4		TGA	[54/1][60/1]
		116±4			[303-38-8]
$\text{C}_7\text{H}_6\text{O}_4$	2,4-dihydroxybenzoic acid	126±6		TGA	[99/36]
		126±6			[89-86-1]
$\text{C}_7\text{H}_6\text{O}_4$	2,5-dihydroxybenzoic acid	109±3		TGA	[99/36]
		109±3			[490-79-9]
$\text{C}_7\text{H}_6\text{O}_4$	2,6-dihydroxybenzoic acid	111±7		TGA	[99/36]
		111±7			[303-07-1]
$\text{C}_7\text{H}_6\text{O}_4$	3,4-dihydroxybenzoic acid	153±9		TGA	[99/36]
		153±9			[99-50-3]
$\text{C}_7\text{H}_6\text{O}_4$	3,5-dihydroxybenzoic acid	135±6		TGA	[99/36]
		135±6			[99-10-5]
$\text{C}_7\text{H}_6\text{O}_5$	3,4,5-trihydroxybenzoic acid	75.1	(406)		[149-91-7]
	(391–421)				[34/2]
$\text{C}_7\text{H}_7\text{NO}$	2-aminotropone	71.13±0.4		ME	[6264-93-3]
	(273–333)				[71/3]
$\text{C}_7\text{H}_7\text{NO}$	benzamide	96.9	(333.5)		[55-21-0]
	(325–342)				[87/4][60/21]
$\text{C}_7\text{H}_7\text{NO}$	(323–349)	101.7±1	(298)	C	[82/2]
					[103-70-8]
$\text{C}_7\text{H}_7\text{NO}_2$	formanilide	77.8	(308)		[87/4][60/21]
	(298–318)				[118-92-3]
$\text{C}_7\text{H}_7\text{NO}_2$	2-aminobenzoic acid (I)	111.6±1.7	(298)		[72/4]
		111.6±1.7			
$\text{C}_7\text{H}_7\text{NO}_2$	2-aminobenzoic acid (II)	100±1	(338)	TE,ME	[79/1]
	(331–349)	99.6±0.5	(378)	C	[74/1]
		104.9±1	(298)	C	[74/1]
$\text{C}_7\text{H}_7\text{NO}_2$	3-aminobenzoic acid				[99-05-8]
	(366–385)	122±1	(375)	TE,ME	[79/1]
	(367–389)	122.3±3		C	[74/1]
$\text{C}_7\text{H}_7\text{NO}_2$	4-aminobenzoic acid	128±3.2	(298)	C	[74/1][77/13]
	(364–384)	112.3±1	(373)	TE,ME	[150-13-0]
	(367–389)	114±3.5		C	[74/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		116±3.7	(298)	C	[74/1][77/13]
		U 142			[38/1][60/1]
C <sub>7</sub> H <sub>7</sub> NO <sub>2</sub>	2-hydroxybenzaldoxime	96.7±9.4	(468)	DSC	[94-67-7]
(melting point 330 K)	(423–513)	105.2±10	(298)		[84/12]
<i>anti</i>		U 51±1.7		MS	[84/12]
<i>syn</i>		U 65.3±1.7		MS	[83/9]
C <sub>7</sub> H <sub>7</sub> NO <sub>2</sub>	3-hydroxybenzaldoxime	U 52.7±1.7		MS	[83/9]
<i>anti</i>		U 57.3±1.7		MS	[83/9]
C <sub>7</sub> H <sub>7</sub> NO <sub>2</sub>	4-hydroxybenzaldoxime	U 54.4±1.7		MS	[699-06-9]
<i>anti</i>					[83/9]
C <sub>7</sub> H <sub>7</sub> NO <sub>2</sub>	4-nitrotoluene	79.1±2.5	(298)	ME	[99-99-0]
	(298–310)	79.1	(298)		[71/4]
C <sub>7</sub> H <sub>7</sub> NO <sub>3</sub>	2,4-dihydroxybenzaldoxime	U 76.2±1.7		MS	[70/3]
<i>anti</i>		U 93.7±1.7		MS	[5399-68-8]
C <sub>7</sub> H <sub>7</sub> NS	thiobenzamide	103.4±2.2	(298)	C	[2227-79-4]
		97.2±0.6	(298)	C	[89/11]
C <sub>7</sub> H <sub>8</sub>	toluene	43.1	(298)	B	[82/17]
C <sub>7</sub> H <sub>8</sub> N <sub>2</sub> O	monophenylurea	136±6	(406)	TE	[108-88-3]
	(392–412)				[64-10-8]
C <sub>7</sub> H <sub>8</sub> N <sub>2</sub> O	2-aminobenzaldoxime	U 33.9±1.7		MS	[87/2]
<i>anti</i>		U 63.6±1.7		MS	[3398-07-0]
C <sub>7</sub> H <sub>8</sub> N <sub>2</sub> O	(2-pyridyl)acetamide	103.8	(298)	B,E	[83/9]
C <sub>7</sub> H <sub>8</sub> N <sub>2</sub>	1-amino-7-imino-1,3,5-cycloheptatriene	49.4±0.4		ME	[83/9]
	(273–333)				[33496-46-7]
C <sub>7</sub> H <sub>8</sub> N <sub>4</sub> O	9-ethylhypoxanthine	108.8±13		HSA	[71/3]
		U 83.7		HSA	[31010-51-2]
C <sub>7</sub> H <sub>8</sub> N <sub>4</sub> O	1,9-dimethylhypoxanthine	75.3±13		HSA	[78/17]
C <sub>7</sub> H <sub>8</sub> N <sub>4</sub> O <sub>2</sub>	1,3-dimethylxanthine (theophylline)	132.0±0.3	(433)	T	[20535-82-4]
form I	(413–453)	142	(298)		[99/40]
form I		134.2±0.3	(433)	T	[99/40]
form II	(413–453)	144	(298)		[99/40]
form II		126	(421)	ME,TE	[99/40]
		135	(298)		[83/17]
C <sub>7</sub> H <sub>8</sub> O	2-methylphenol	74.8	(288)		[83/17][99/40]
	(273–303)	76.0±0.8	(288)		[95-48-7]
C <sub>7</sub> H <sub>8</sub> O	3-methylphenol	56.1	(279)		[87/4]
	(273–285)	61.7±1.0 (liq)		GS	[60/3]
C <sub>7</sub> H <sub>8</sub> O	4-methylphenol	73.9±1.5	(290)		[108-39-4]
	(273–307)				[106-44-5]
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub>	4-methoxyphenol	88.7	(289)		[60/3][70/1]
	(278–300)				[150-76-5]
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub>	3-methyl-1,2-dihydroxybenzene	93.2±1.0	(298)	C	[87/4][60/14]
					[488-17-5]
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub>	4-methyl-1,2-dihydroxybenzene	94.9±1.0	(298)	C	[84/20]
					[452-86-8]
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub>	2-methyl-1,4-dihydroxybenzene	97.2±1.4	(351)	GS	[84/20]
	(333–368)	100.4±1.4	(298)		[95-71-6]
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub> S	4-methoxy-6-methyl-2-thiopyrone	130.5±5.9	(408)	B	[99/28]
	(402–415)				[99/28]
					[52911-98-5]
					[74/21]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub> S	6-methyl-2-methylthio-4-pyrone (388–433)	87.4±3.8	(410)	B	[52911-99-6] [74/21]
C <sub>7</sub> H <sub>8</sub> O <sub>2</sub> S	methyl phenyl sulfone	92±2.9			[3112-85-4] [U/3][70/1]
C <sub>7</sub> H <sub>8</sub> O <sub>3</sub>	3-methoxycatechol	91.7±0.8	(298)		[934-00-9] [86/3]
C <sub>7</sub> H <sub>8</sub> S <sub>3</sub>	4,5-tetramethylene-1,3-dithiole-2-thione (340–352)	98.3 102.1±2.9	(346)		[698-42-0] [67/5][70/1] [67/5][70/1]
C <sub>7</sub> H <sub>8</sub> S <sub>3</sub>	4,5-tetramethylene-1,2-dithiole-3-thione (335–350)	101.6 105.3	(342) (298)		[14085-34-8] [72/16] [72/16]
C <sub>7</sub> H <sub>9</sub> F <sub>3</sub> N <sub>2</sub> O <sub>4</sub>	N-[N-(trifluoroacetyl)glycyl]glycine methyl ester (323–419)	127.9	(338)		[433-33-0] [87/4][60/20]
C <sub>7</sub> H <sub>9</sub> N	p-toluidine	78.8±0.5	(298)		[106-49-0] [90/24]
C <sub>7</sub> H <sub>9</sub> N <sub>5</sub>	8,9-dimethyladenine (369–374)	105.8±0.8	(361)	ME	[87578-82-3] [87/7]
C <sub>7</sub> H <sub>9</sub> N <sub>5</sub>	2,9-dimethyladenine (359–364)	123.5	(371)		[76470-20-7] [92/5]
C <sub>7</sub> H <sub>10</sub>	norbornene	37.8±0.14 37.7±0.9 38.7±0.5 33.6±0.08	(298) (298) (298) solid phase transition 4.37	C BG C	[498-66-8] [82/4] [78/5] [76/4] [73/27] [92/17] [279-19-6]
C <sub>7</sub> H <sub>10</sub>	nortricyclene	38.7±0.7 39.2±1.1	(298) (298)	BG C	[78/5] [76/4]
C <sub>7</sub> H <sub>10</sub> N <sub>2</sub>	<i>α</i> -tert-butylmalononitrile (293–323)	59.8±0.7	(298)		[4210-60-0] [90/18]
C <sub>7</sub> H <sub>10</sub> N <sub>2</sub> O <sub>2</sub>	1,3-dimethylthymine (313–363)	109.2±2.1	(338)	QR	[4401-71-2] [80/19]
C <sub>7</sub> H <sub>10</sub> N <sub>2</sub> O <sub>2</sub>	1,3,5-trimethyluracil (321–331)	103.5±1.5	(326)	ME	[4401-71-2] [96/5]
C <sub>7</sub> H <sub>10</sub> N <sub>2</sub> O <sub>2</sub>	1,3,6-trimethyluracil (300–340)	106.7±2.5	(320)	QR	[13509-52-9] [80/19]
C <sub>7</sub> H <sub>10</sub> O	bicyclo[2.2.1]heptan-2-one (300–340)	49.0±1.7	(298)	BG	[497-38-1] [78/1]
C <sub>7</sub> H <sub>10</sub> O	bicyclo[2.2.1]heptan-7-one (300–340)	47.3±2.2	(298)	BG	[10218-02-7] [78/1]
C <sub>7</sub> H <sub>10</sub> O <sub>2</sub>	2-oxabicyclo[2.2.2]octan-3-one	69.6±2.1			[4350-84-9] [80/17]
C <sub>7</sub> H <sub>10</sub> O <sub>3</sub>	2,4,10-trioxaadamantane	74.4±0.4	(298)	C	[281-32-3] [74/16]
C <sub>7</sub> H <sub>10</sub> O <sub>3</sub>	tetramethylsuccinic anhydride	74.1±4.2			[281-32-3] [54/3][70/1]
C <sub>7</sub> H <sub>10</sub> S <sub>3</sub>	4,5-tetramethylene-1,3-dithiolan-2-thione (353–369)	99.0 103.9±2.9	(360) (298)		[2164-87-6] [67/5][70/1] [67/5][70/1]
C <sub>7</sub> H <sub>11</sub> N <sub>3</sub> O	1,N,N-trimethylcytosine	110.9±1.7			[2228-27-5] [98/37]
C <sub>7</sub> H <sub>11</sub> N <sub>3</sub> O	1,5,N-trimethylcytosine (396–431)	108.0±2.0		GS	[25307-94-2] [98/37]
C <sub>7</sub> H <sub>11</sub> N <sub>3</sub> O <sub>2</sub>	1,5-dimethyl-N-methoxycytosine (327–365)	95.6±0.7		GS	[98/37]
C <sub>7</sub> H <sub>11</sub> N <sub>5</sub> O <sub>10</sub>	1,1,1,4,4-pantanitro-2,2-dimethylpentane	103.8	(298)		[242800-94-8] [99/35]
C <sub>7</sub> H <sub>12</sub>	bicyclo[2.2.1]heptane	40.0±0.1 40.3±0.32 40.4±0.8 39.33±0.13	(298) (298) (298) [73/27]	C C	[279-23-2] [87/1] [82/4] [78/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	CAS registry number
Polymorph	Temperature range (K)			Reference
		40.1±0.8		[71/1][77/1]
	(284–326)	40.0±0.8	(305)	[75/2]
$\text{C}_7\text{H}_{12}\text{ClN}_5$	2-chloro-4,6-bis(ethylamino)- <i>s</i> -triazine (Simazin)			[122-34-9]
	(323–403)	130.8	(338)	[87/4][64/14]
$\text{C}_7\text{H}_{12}\text{O}_3$	1,4-dimethyl-2,6,7-trioxabicyclo[2.2.2]octane	74.9	(298)	[27761-61-1] [95/28]
$\text{C}_7\text{H}_{12}\text{O}_4$	1,7-heptanedioic acid (pimelic acid)			[111-16-0]
	(288–308)	178		[01/15]
	(358–371)	136.6±1.0	(365)	[99/10]
		139.9±1.0	(298)	[99/10]
$\text{C}_7\text{H}_{12}\text{O}_4$	butylmalonic acid			[534-59-8]
	(348–362)	122.5±1.4	(355)	[00/22]
		124.6±2.3	(298)	[00/22]
$\text{C}_7\text{H}_{13}\text{N}$	1-azabicyclooctane	50.8±0.4		[100-76-5]
	(273–362)	50.8±0.2	(298)	[71/10][77/1] [48/3][70/1] [60/1]
$\text{C}_7\text{H}_{13}\text{NO}$	<i>trans</i> -6-heptenoic acid amide			[87/4]
	(362–393)	97.2	(377)	[291-64-5]
$\text{C}_7\text{H}_{14}$	cycloheptane	53.5	(134)	[63/6]
$\text{C}_7\text{H}_{14}\text{N}_2$	3,3,5,5-tetramethyl-1-pyrazoline	61.6±0.2	(298)	[2721-31-5] [76/12]
$\text{C}_7\text{H}_{14}\text{N}_2\text{O}_2$	N-acetyl L-valinamide			[37933-88-3]
		129.8±1.9	(376)	C [99/12]
		133.1±2.2	(298)	[99/12]
	(391–425)	126±2.0	(418)	[90/13]
$\text{C}_7\text{H}_{14}\text{N}_2\text{O}_2\text{S}$	2-methyl-2(methylthio)propanal, O-[{(methylamino)carbonyl]oxime}			[116-06-3]
	(298–323)	80	(310)	[87/4][76/11]
$\text{C}_7\text{H}_{14}\text{O}$	1-methylcyclohexanol	75.9±0.4	(291)	[590-67-0] [98/34]
$\text{C}_7\text{H}_{15}\text{NO}$	heptanamide (enanthamide)			[628-62-6] [59/3][60/1] [87/4]
	(345–365)	99.6		
$\text{C}_7\text{H}_{15}\text{NO}_2$	hexyl carbamate			[2114-20-7]
	(291–314)	96.2±0.8		[59/4]
$\text{C}_7\text{H}_{16}$	<i>n</i> -heptane	57.9	(183)	B [142-82-5] [63/6]
$\text{C}_7\text{H}_{16}\text{N}_2\text{S}$	1,3-di- <i>n</i> -propylthiourea	134.9±3	(298)	[26536-60-7] B,HA [00/23]
		132.5±3.0	(298)	C [94/17]
$\text{C}_8\text{Cl}_4\text{N}_2$	2,4,5,6-tetrachloro-1,3-benzenedicarbonitrile			[1897-45-6]
	(363–418)	109.1	(378)	[87/4][80/37]
$\text{C}_8\text{H}_2\text{Cl}_4\text{N}_2$	2,3,6,7-tetrachloroquinoxaline	106.2±0.3	(354)	[25983-14-6] ME
	(347–361)	108.2±1.9	(298)	[00/26]
$\text{C}_8\text{H}_4\text{Cl}_2\text{N}_2$	2,3-dichloroquinoxaline			[2213-63-0]
	(313–329)	92.4±0.4	(321)	ME [00/26]
		93.1±0.9	(298)	ME [00/26]
$\text{C}_8\text{H}_4\text{N}_2$	1,2-dicyanobenzene	86.9±1.5	(298)	GS [91-15-6] [80/10]
$\text{C}_8\text{H}_4\text{N}_2$	1,3-dicyanobenzene	90.1±1.5	(298)	GS [626-17-5] [80/10]
$\text{C}_8\text{H}_4\text{N}_2$	1,4-dicyanobenzene	89.7±1.8	(298)	GS [623-26-7] [92/24]
		88.8±1.5	(298)	[80/10]
$\text{C}_8\text{H}_4\text{N}_2\text{O}_2$	1,4-dicyanobenzene di-N-oxide	73.0±2.0	(298)	[3729-34-8] ME [92/24]
$\text{C}_8\text{H}_4\text{O}_2$	benzocyclobutenedione	U 89.5	(336)	[6383-11-5] [89/9]
$\text{C}_8\text{H}_4\text{O}_3$	phthalic anhydride	87.9	(348)	[85-44-9] [87/4][72/25]
	(313–383)	84.4±1.2	(388)	[79/6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}$ /kJ mol <sup>-1</sup>	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		81±1		C	[71/6]
	(303–333)	88.4±1.2	(318)		[46/2][70/1] [60/1]
C <sub>8</sub> H <sub>5</sub> F <sub>3</sub> OS <sub>2</sub>	1,1,1-trifluoro-4-(2-thienyl)-4-mercapto-3-butene-2-one	95.1±3.7	(298)	C	[4552-64-1]
C <sub>8</sub> H <sub>5</sub> F <sub>3</sub> O <sub>2</sub> S	1,1,1-trifluoro-4-(2-thienyl)-4-hydroxy-3-butene-2-one	86.2±0.6	(298)	C	[97/19]
		86.2±0.6	(298)	ME	[15788-02-0] [92/28]
C <sub>8</sub> H <sub>5</sub> F <sub>3</sub> O <sub>3</sub>	4,4,4-trifluoro-1-(2-furanyl)-butane-1,3-dione	70±10	(298)		[326-90-9]
C <sub>8</sub> H <sub>5</sub> NO	$\alpha$ -oxo-benzeneacetonitrile	78.7±4.2	(298)		[97/33] [613-90-1]
	(292–304)				[69/9][77/1] [87/4]
C <sub>8</sub> H <sub>5</sub> NO <sub>2</sub>	phthalimide				[85-41-6]
	(378–418)	82.8	(393)	RG	[87/4][56/13]
C <sub>8</sub> H <sub>5</sub> N <sub>3</sub>	pyridinium dicyanomethylide				[27032-01-5]
	(403–433)	125.4	(418)		[87/4]
	(403–433)	125.5±1.3		ME	[67/3][70/1]
C <sub>8</sub> H <sub>6</sub> ClNO <sub>3</sub>	2-nitrobenzeneacetyl chloride				[22751-23-1]
	(296–327)	103.6	(311)	TE	[87/4][47/1] [60/1]
C <sub>8</sub> H <sub>6</sub> ClNO <sub>3</sub>	3-nitrobenzeneacetyl chloride				[99-47-8]
	(299–343)	109.1	(314)	TE	[87/4][47/1] [60/1]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub>	phthalazine				[253-52-1]
		82.3±2.3	(298)	C	[95/25]
		81.1±0.4	(298)	C	[98/7][93/19]
		96.7		ME	[72/10]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub>	quinoxaline				[91-19-0]
		66.6±2.0	(298)	C	[95/25]
		69.4±0.6	(298)	C	[93/19]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub>	quinazoline				[253-82-7]
		77.6±0.5	(298)	C	[98/7][93/19]
		76.6±1.4	(298)	C	[95/25]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O	2-hydroxyquinoxaline				[1196-57-2]
	(383–399)	116.1±0.6	(391)	ME	[00/26]
		118.5±3.1	(298)	ME	[00/26]
		125.8±4.0	(298)	C	[00/15]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	2,3-dihydroxyquinoxaline				[15804-19-0]
		156.3±5.5	(298)	C	[00/15]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	quinoxaline-1,4-dioxide				[2433-66-7]
		112.0±1.9	(298)	C	[97/25]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	3-aminophthalimide				[2518-24-3]
	(386–459)	108.3	(401)	RG	[87/4][56/13]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	4-aminophthalimide				[3676-85-5]
	(444–498)	135.3	(459)		[87/4]
C <sub>8</sub> H <sub>6</sub> N <sub>4</sub>	monobenzo-1,3 $\alpha$ ,4,6 $\alpha$ -tetraazapentalene				
	(323–373)	74.9±2.9	(348)		[67/6]
C <sub>8</sub> H <sub>6</sub> N <sub>4</sub>	monobenzo-1,3 $\alpha$ ,6,6 $\alpha$ -tetraazapentalene				
	(323–383)	63.6±2.9	(350)		[67/6]
C <sub>8</sub> H <sub>6</sub> O <sub>3</sub>	piperonal				[120-57-0]
	(293–353)	90.8	(323)		[53/7][60/1] [87/4]
C <sub>8</sub> H <sub>6</sub> O <sub>4</sub>	phthalic acid				[88-99-3]
		129.8±0.6	(298)	C	[99/16]
C <sub>8</sub> H <sub>6</sub> O <sub>4</sub>	isophthalic acid				[121-91-5]
		142.0±0.7	(298)	C	[99/16]
	(493–563)	114.2	(508)		[87/4][62/2]
	(493–563)	106.7±2.2	(523)	GS	[62/2][70/1]
C <sub>8</sub> H <sub>6</sub> O <sub>4</sub>	terephthalic acid				[100-21-0]
		146.6±0.5	(298)	C	[99/16]
	(523–633)	139.2	(538)		[87/4][62/2]
	(523–633)	131.	(573)	GS	[62/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_8\text{H}_6\text{S}$	(392–425)	98.24±2.5	(408)		[34/2][70/1]
	2,3-benzothiophene				[95-15-8]
$\text{C}_8\text{H}_7\text{ClO}$	(273–403)	61.1	(288)	GS	[81/14]
		65.7±0.2	(298)	C	[79/2]
$\text{C}_8\text{H}_7\text{NO}_3$	2-chloroacetophenone	90.7	(293)	TE	[532-27-4]
	(278–323)				[87/4][47/1]
$\text{C}_8\text{H}_7\text{N}$	indole				[120-72-9]
	(291–319)	75	(305)		[87/4]
	(275–303)	77.8±1.6	(289)	ME	[74/5]
	(283–301)	70.0	(292)		[55/10]
	(283–328)	74.9	(305)		[54/4][60/1]
$\text{C}_8\text{H}_7\text{NO}_4$	3-nitroacetophenone	110	(308)		[121-89-1]
	(293–343)				[87/4]
$\text{C}_8\text{H}_7\text{NO}_4$	2-methyl-3-nitrobenzoic acid				[1975-50-4]
	(357–371)	117.3±0.6	(364)	ME	[01/7]
$\text{C}_8\text{H}_7\text{NO}_4$		119.5±2.3	(298)	ME	[01/7]
	2-methyl-6-nitrobenzoic acid				[13506-76-8]
$\text{C}_8\text{H}_7\text{NO}_4$	(355–369)	117.8±0.6	(362)	ME	[01/7]
		120.0±2.2	(298)	ME	[01/7]
$\text{C}_8\text{H}_7\text{NO}_4$	3-methyl-2-nitrobenzoic acid				[5437-38-7]
	(371–385)	121.7±0.5	(378)	ME	[01/7]
$\text{C}_8\text{H}_7\text{NO}_4$		124.4±2.7	(298)	ME	[01/7]
	3-methyl-4-nitrobenzoic acid				[3113-71-1]
$\text{C}_8\text{H}_7\text{NO}_4$	(363–379)	116.8±0.6	(371)	ME	[01/7]
		119.3±2.5	(298)	ME	[01/7]
$\text{C}_8\text{H}_7\text{NO}_4$	4-methyl-3-nitrobenzoic acid				[96-98-0]
	(363–377)	116.1±0.6	(370)	ME	[01/7]
$\text{C}_8\text{H}_7\text{NO}_4$		118.6±2.5	(298)	ME	[01/7]
	5-methyl-2-nitrobenzoic acid				[3113-72-2]
$\text{C}_8\text{H}_7\text{NO}_4$	(355–371)	116.5±0.5	(363)	ME	[01/7]
		118.7±2.2	(298)	ME	[01/7]
$\text{C}_8\text{H}_7\text{NO}_5$	3-methoxy-2-nitrobenzoic acid				[4920-80-3]
	(398–410)	136.6±1.3	(404)	ME	[99/31]
$\text{C}_8\text{H}_7\text{NO}_5$		141.9±1.3	(298)	ME	[99/31]
	4-methoxy-3-nitrobenzoic acid				[89-41-8]
$\text{C}_8\text{H}_7\text{NO}_5$	(387–401)	126.5±0.8	(394)	ME	[99/31]
		131.2±0.8	(298)	ME	[99/31]
$\text{C}_8\text{H}_7\text{NO}_5$	3-methoxy-4-nitrobenzoic acid				[5081-36-7]
	(388–402)	126.1±1.1	(395)	ME	[99/31]
$\text{C}_8\text{H}_7\text{NO}_5$		131.0±1.1	(298)	ME	[99/31]
$\text{C}_8\text{H}_7\text{N}_3\text{O}_2$	3,6-diaminophthalimide				[1660-15-7]
	(461–508)	98.5	(476)	RG	[87/4][56/13]
$\text{C}_8\text{H}_7\text{N}_3\text{O}_6$	2,2,2-trinitro-1-phenylethane				[38677-56-4]
	(293–308)	84.1±0.4	(301)	ME	[72/6][77/1]
$\text{C}_8\text{H}_7\text{N}_3\text{O}_6$					[87/4]
	3-methyl-2,4,6-trinitrotoluene				[632-92-8]
$\text{C}_8\text{H}_7\text{N}_3\text{O}_7$	(319–411)	129.8±1.1	(365)	ME	[87/4][78/15]
	2,4,6-trinitrophenetole				[4732-14-3]
$\text{C}_8\text{H}_8$	(352–364)	79 (liq)	(358)	ME	[87/4][50/2]
	(342–352)	120.5±2.1	(347)	ME	[50/5][70/1]
$\text{C}_8\text{H}_8$	cubane				[50/2]
	(239–262)	80.3±1.6	(298)	ME	[277-10-1]
$\text{C}_8\text{H}_8$	cyclooctatetraene				[66/2][70/1]
		54.4		B	[87/4]
$\text{C}_8\text{H}_8\text{N}_2\text{O}_2$	1,3-benzeneddicarboxamide				[49/9]
		54.4±4.2		ME	[1740-57-4]
$\text{C}_8\text{H}_8\text{N}_2\text{O}_2$	1,4-benzeneddicarboxamide				[71/15][77/1]
	(373–498)	57.3±4.2			[3010-82-0]
$\text{C}_8\text{H}_8\text{O}$	2-phenylacetic acid				[72/14][77/1]
	(305–321)	98.6±0.4	(313)	ME	[103-82-2]
					[01/10]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}$ /kJ mol <sup>-1</sup>	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>	2-methylbenzoic acid (297–337)	99.0±0.6 95.9±0.1 137.7±0.5	(298)	ME DSC	[01/10] [118-90-1] [86/4] [83/8]
C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>	3-methylbenzoic acid (303–323)	97.0±0.3	(298)	ME	[99-04-7] [86/4]
C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>	4-methylbenzoic acid (318–337)	98.8±0.3	(298)	ME	[99-94-5] [86/4]
C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>	2,5-dimethyl-1,4-benzoquinone (273–293)	77.0	(283)	QF	[137-18-8] [27/2][60/1] [87/4]
C <sub>8</sub> H <sub>8</sub> O <sub>2</sub>	4-hydroxyacetophenone (320–349)	95.7	(335)		[99-93-4] [87/4][60/14]
C <sub>8</sub> H <sub>8</sub> O <sub>2</sub> S	phenyl vinyl sulfone	82±2.5		B	[5535-48-8] [69/11][77/1]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	2-methoxybenzoic acid (318–353)	101.2	(333)		[579-75-9] [87/4]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	(319–324)	104.7±0.3	(322)	ME	[78/7]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	(353–368)	90.8±0.4	(360)	GS	[73/2][87/4]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	(353–368)	90.9	(360)	GS	[54/1][60/1]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	3-methoxybenzoic acid (318–326)	107.5±0.4	(322)	ME	[586-38-9] [87/4][78/7]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	4-methoxybenzoic acid (334–344)	109.8±0.6	(339)	ME	[100-09-4] [87/4][78/7]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	2-hydroxy-3-methoxybenzaldehyde (282–303)	54.1	(292.5)		[148-53-8] [87/4]
C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>	4-hydroxy-3-methoxybenzaldehyde (vanillin) (293–353)	88.7	(323)		[121-33-5] [53/7][60/1]
C <sub>8</sub> H <sub>9</sub> NO	acetanilide (303–324)	80.6	(313.5)		[103-84-4] [87/4][55/3]
C <sub>8</sub> H <sub>9</sub> NO	(317–336)	87.2	(326.5)		[87/4][60/21]
C <sub>8</sub> H <sub>9</sub> NO <i>anti</i>	3-methylbenzaldoxime	U 31±1.7		MS	[41977-54-2] [83/9]
C <sub>8</sub> H <sub>9</sub> NO <i>anti</i>	4-methylbenzaldoxime	U 36±1.7		MS	[3235-02-7] [83/9]
C <sub>8</sub> H <sub>9</sub> NO	2-phenylacetamide (329–352)	96.4	(340.5)		[103-81-1] [87/4][60/21]
C <sub>8</sub> H <sub>9</sub> NO	4-aminoacetophenone (314–338)	92.7	(326)		[99-92-3] [87/4][60/21]
C <sub>8</sub> H <sub>9</sub> NO	N-methylbenzamide (297–321)	75	(309)		[613-93-4] [87/4][55/3]
C <sub>8</sub> H <sub>9</sub> NO	(307–329)	85.7	(318)		[87/4][60/21]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	2-amino-3-methylbenzoic acid (343–357)	105.8±0.6 107.3±1.8	(350) (298)	ME	[4389-45-1] [01/20] [01/20]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	2-amino-5-methylbenzoic acid (345–361)	108.9±0.5 110.6±1.9	(353) (298)	ME	[2941-78-8] [01/20] [01/20]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	2-amino-6-methylbenzoic acid (339–355)	114.7±1.2 116.1±2.0	(347) (298)	ME	[4389-50-8] [01/20] [01/20]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	3-amino-2-methylbenzoic acid (367–381)	125.6±0.8 127.8±2.6	(374) (298)	ME	[52130-17-3] [01/20] [01/20]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	3-amino-4-methylbenzoic acid (363–377)	117.3±0.9 119.4±2.5	(370) (298)	ME	[2458-12-0] [01/20] [01/20]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	4-amino-3-methylbenzoic acid (367–383)	119.8±0.7 122.0±2.6	(375) (298)	ME	[2486-70-6] [01/20] [01/20]
C <sub>8</sub> H <sub>9</sub> NO <sub>2</sub>	N-phenylglycine	114.1±1.0 128.0±2.0	(365.4) (298)	C	[103-01-5] [80/29] [80/29]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_8\text{H}_9\text{NO}_2$	D $\alpha$ -phenylglycine	$148.9 \pm 2.2$ $165.0 \pm 6.0$	(443) (298)	C C	[875-74-1] [80/29] [80/29]
$\text{C}_8\text{H}_9\text{NO}_2$ <i>anti</i>	2-methoxybenzaldoxime	$U 20.1 \pm 1.7$		MS	[29577-53-5] [83/9]
$\text{C}_8\text{H}_9\text{NO}_2$ <i>syn</i>		$U 32.6 \pm 1.7$		MS	[83/9]
$\text{C}_8\text{H}_9\text{NO}_2$ <i>anti</i>	4-methoxybenzaldoxime	$U 67.3 \pm 1.7$		MS	[5235-04-9] [83/9]
$\text{C}_8\text{H}_9\text{NO}_2$	methyl 2-aminobenzoate (287–298)	78.4	(292.5)	ME	[134-20-3] [87/4][54/4] [60/1]
$\text{C}_8\text{H}_9\text{NO}_7$	methyl 5-nitro-2-acetoxy-2,5-dihydro-2-furancarboxylate	$89.1 \pm 2.1$			[22401-53-2] [80/28][86/5]
$\text{C}_8\text{H}_{10}$	1,2-dimethylbenzene	60.1	(248)	B	[95-47-6] [86/12]
$\text{C}_8\text{H}_{10}$	1,4-dimethylbenzene (247–286)	59.4 60.8	(271) (286)	B	[106-42-3] [87/4][74/32] [86/12]
$\text{C}_8\text{H}_{10}\text{NO}_5\text{PS}$	methyl parathion (O,O-dimethyl-O-4-nitro-phenylthiophosphate) (298–308) (278–288)	125.1 108.7	(303) (283)	GS,A GS	[298-00-0] [84/33] [83/5][79/10]
$\text{C}_8\text{H}_{10}\text{N}_2\text{O}$	4-N,N-dimethylaminonitrosobenzene (323–334)	$82.0 \pm 1.7$	(298)	ME	[138-89-6] [94/29]
$\text{C}_8\text{H}_{10}\text{N}_2\text{O}_2$	N,N-dimethyl-3-nitroaniline	$92.7 \pm 0.3$	(298)	C	[619-31-8] [85/5]
$\text{C}_8\text{H}_{10}\text{N}_2\text{O}_2$	N,N-dimethyl-4-nitroaniline (344–366) (372–393)	102.7 ± 1.1 98.7 ± 1.7 101.3 ± 2.0	(298) (355) (298)	C ME ME	[100-23-2] [85/5] [87/4][56/2] [94/29]
$\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$ form I	caffeine (1,3,7-trimethylxanthine) (413–463)	$104.8 \pm 0.2$	(438)	T	[58-08-2] [99/40]
form I		115	(298)		[99/40]
form II	(413–463)	$113.6 \pm 0.2$	(369)	T	[99/40]
form II		119	(298)		[99/40]
		105.1 ± 0.7		ME	[85/22]
	(373–473)	103.6	(423)	UV	[84/37]
form I	(446–509)	$100.0 \pm 0.6$	(478)	MM	[79/17]
form I		110	(298)		[79/17][99/40]
form II	(446–509)	$110.7 \pm 0.7$	(362)	MM	[79/17]
form II		114	(298)		[79/17][99/40]
$\text{C}_8\text{H}_{10}\text{O}$	4-ethylphenol (278–317)	$80.3 \pm 0.5$		GS	[123-07-9] [63/3][70/1] [87/4]
$\text{C}_8\text{H}_{10}\text{O}$	2,3-dimethylphenol (283–323)	$84. \pm 1.0$		GS	[526-75-0] [60/3][70/1] [87/4]
$\text{C}_8\text{H}_{10}\text{O}$	2,4-dimethylphenol (282–318)	$65.9 \pm 0.2$		GS	[105-67-9] [60/3][70/1]
$\text{C}_8\text{H}_{10}\text{O}$	2,5-dimethylphenol (282–323)	$85.0 \pm 0.25$		GS	[95-87-4] [60/3][70/1] [87/4]
$\text{C}_8\text{H}_{10}\text{O}$	2,6-dimethylphenol (277–313)	$75.6 \pm 0.17$		GS	[576-26-1] [60/3][70/1] [87/4]
$\text{C}_8\text{H}_{10}\text{O}$	3,4-dimethylphenol (282–323)	$85.7 \pm 0.1$		GS	[95-65-8] [60/3][70/1] [87/4]
$\text{C}_8\text{H}_{10}\text{O}$	3,5-dimethylphenol (282–323)	$82.8 \pm 0.3$		GS	[108-68-9] [60/3][70/3] [87/4]
$\text{C}_8\text{H}_{10}\text{O}_2$	2,5-dimethylhydroquinone (332–361)	100.8		QF	[615-90-7] [27/2][60/1]
$\text{C}_8\text{H}_{10}\text{O}_2$	1,4-dimethoxybenzene				[150-78-7]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>8</sub> H <sub>10</sub> O <sub>2</sub> S	methyl- <i>p</i> -tolyl sulfone	84.1±2.3	(298)		[00/24] [3185-99-7]
C <sub>8</sub> H <sub>10</sub> O <sub>2</sub> S	methyl benzyl sulfone	100±3.3			[U/3][70/1]
C <sub>8</sub> H <sub>11</sub> N	1-norbornylisocyanide	99.2±3			[3112-90-1] [U/3][70/1]
C <sub>8</sub> H <sub>11</sub> N <sub>5</sub>	8-ethyl-9-methyladenine	60.6±0.5	(298)		[103434-09-9] [87/17] [116988-56-8]
C <sub>8</sub> H <sub>11</sub> N <sub>5</sub>	(365–370)	127.1±0.7			[94/6]
C <sub>8</sub> H <sub>11</sub> N <sub>5</sub>	6,8,9-trimethyladenine	115.2±1.0	(368)	ME	[87/7] [139909-51-6]
C <sub>8</sub> H <sub>12</sub>	(334–342)	98.6±0.2	(338)	ME	[94/6]
C <sub>8</sub> H <sub>12</sub>	bicyclo[2.2.2]octene	43.8±0.4		C	[931-64-6] [70/5][77/1] [71/10]
C <sub>8</sub> H <sub>12</sub> N <sub>2</sub>	tetramethylsuccinonitrile	81.2±1.7			[3333-52-6] [73/8][77/1]
C <sub>8</sub> H <sub>12</sub> N <sub>2</sub>	tetramethylpyrazine	94.6±4.0	(298)	C	[1124-11-4] [96/28]
C <sub>8</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	1,3-dimethyl-5-ethyluracil	98.7±1.7	(316)	ME	[31703-08-9] [96/5]
C <sub>8</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	(300–316)	99.3±0.2	(308)	ME	[83/14]
C <sub>8</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	(319–340)	110±1.2	(330)	QR	[83/14]
C <sub>8</sub> H <sub>12</sub> O <sub>2</sub>	4,4-dimethyl-1,3-cyclohexanedione	99.2±2.1	(298)	ME	[562-46-9] [93/23]
C <sub>8</sub> H <sub>12</sub> O <sub>2</sub>	5,5-dimethyl-1,3-cyclohexanedione	99.8±1.1	(298)	ME	[126-81-8] [93/23]
C <sub>8</sub> H <sub>12</sub> O <sub>2</sub>	2,2,4,4-tetramethyl-1,3-cyclobutanedione	70.3±3.5		HSA	[933-52-8] [75/3]
C <sub>8</sub> H <sub>12</sub> O <sub>2</sub>		72.2±0.6			[71/5]
C <sub>8</sub> H <sub>12</sub> O <sub>2</sub>		72.4±0.6		C	[71/23]
C <sub>8</sub> H <sub>14</sub>	bicyclo[2.2.2]octane	46.3±0.8		BG	[280-33-1] [71/1][77/1] [87/4]
C <sub>8</sub> H <sub>14</sub>	(323–363)	47.7±0.8	(298)	HA	[71/1][77/1]
C <sub>8</sub> H <sub>14</sub>		48.0±2		C	[70/5][71/1] [77/1]
C <sub>8</sub> H <sub>14</sub>	solid phase transition	4.6	(164)		[84/25]
C <sub>8</sub> H <sub>14</sub>	3,4-dimethyl-2,4-hexadiene	53.1			
C <sub>8</sub> H <sub>14</sub> ClN <sub>5</sub>	2-chloro-4-ethylamino-6-isopropylamino-1,3,5-triazine (atrazine)				[56/7][60/1] [1912-24-9]
C <sub>8</sub> H <sub>14</sub> ClN <sub>5</sub>	(324–354)	114.6	(339)	GS	[82/23]
C <sub>8</sub> H <sub>14</sub> ClN <sub>5</sub>	(323–403)	113.8	(338)	GS-GC	[64/14][87/4] [49570-30-1]
C <sub>8</sub> H <sub>14</sub> N <sub>2</sub>	1,4-dimethyl-2,3-diazabicyclo[2.2.2]octane	72.0±0.5	(298)	C	[76/12]
C <sub>8</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub>	$\alpha$ -acetylproline N-methylamide	69.1	(313)		[19701-85-0] [87/4][55/7]
C <sub>8</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub>	$\beta$ -acetylproline N-methylamide	60.7	(327)		[87/4][55/7]
C <sub>8</sub> H <sub>14</sub> O	3-oxabicyclo[3.2.2]nonane	53.1±0.5			[283-27-2] [71/10][77/1]
C <sub>8</sub> H <sub>14</sub> O <sub>4</sub>	1,8-octanedioic acid (suberic acid)				[505-8-6]
C <sub>8</sub> H <sub>14</sub> O <sub>4</sub>	(310–320)	148		TPTD	[01/15]
C <sub>8</sub> H <sub>14</sub> O <sub>4</sub>		147.8±3.8	(298)		[99/10][60/4]
C <sub>8</sub> H <sub>14</sub> O <sub>4</sub>	(379–407)	143.1±3.8	(393)	M	[60/4][70/1] [87/4]
C <sub>8</sub> H <sub>14</sub> O <sub>6</sub>	( <i>d</i> )-dimethoxysuccinic acid dimethyl ester	53.1			[37/6]
C <sub>8</sub> H <sub>14</sub> O <sub>6</sub>	( <i>dl</i> )-dimethoxysuccinic acid dimethyl ester	57.7			[37/6]
C <sub>8</sub> H <sub>14</sub> O <sub>6</sub>	<i>meso</i> dimethoxysuccinic acid dimethyl ester	74.1			[37/6]
C <sub>8</sub> H <sub>15</sub> N	3-azabicyclo[3.2.2]nonane				[283-24-9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_8\text{H}_{15}\text{NO}$	<i>trans</i> 2-octenoic acid amide (373–393)	57.8±1.3 73.5	(298) (383)	C	[70/5] [87/4]
$\text{C}_8\text{H}_{15}\text{N}_5\text{O}$	2-methoxy-4,6-bis(ethylamino)-1,3,5-triazine (323–403)	98.2	(338)	GS–GC	[673-04-1] [87/4][64/14]
$\text{C}_8\text{H}_{15}\text{N}_5\text{S}$	2-methylthio-4,6-bis(ethylamino)-1,3,5-triazine (323–355)	101.3	(338)	GS–GC	[1014-70-6] [87/4][64/14]
$\text{C}_8\text{H}_{15}\text{N}_5\text{S}$	2-methylthio-4-methylamino-6-isopropyl-1,3,5-triazine (323–357)	101.5	(338)	GS–GC	[1014-69-3] [87/4][64/14]
$\text{C}_8\text{H}_{15}\text{N}_7\text{O}_2\text{S}_3$	3-[[2-[(aminoiminomethyl)aminol]-4-thiazoly]methyl]thio]-N-(aminosulfonyl)propanimidamide (famotidine)				[76824-35-6]
$\text{C}_8\text{H}_{16}$	cyclooctane	207.0		TGA	[97/36] [292-64-8]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl L-leucine amide	58.7	(166)	B	[63/6] [28529-34-2]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl D-leucine amide	115.6±1.4 119.8±1.5	(376) (298)	C	[99/12] [99/12]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl L-isoleucine amide	114.8±0.3 120.4±0.4 (374–401) 101±3	(393) (298) (388)	C TE	[16624-68-3] [99/12] [99/12] [88/6][86/16]
$\text{C}_8\text{H}_{16}\text{N}_2\text{O}_2$	N-acetyl L-isoleucine amide	142.7±0.2 147.4±0.3	(390) (298)	C	[56711-06-9] [99/12] [99/12]
$\text{C}_8\text{H}_{17}\text{NO}$	octanamide (325–374)	110.5±2.9		GS,ME	[629-01-6] [59/3][87/4]
$\text{C}_8\text{H}_{17}\text{NO}_2$	8-aminooctanoic acid (391–402)	166.2±0.9 170±4	(397) (298)	C C	[1002-57-9] [83/24] [83/24]
$\text{C}_8\text{H}_{18}$	<i>n</i> -octane	68.1	(216)	B	[111-65-9] [63/6]
$\text{C}_8\text{H}_{18}$	2,2,3,3-tetramethylbutane (286–377)	43.6	(301)		[594-82-1] [87/4]
$\text{C}_8\text{H}_{18}$	(273–338)	43.4±0.2	(298)		[52/1][70/1]
$\text{C}_8\text{H}_{18}$		42.9±0.9	(298)		[47/8]
$\text{C}_8\text{H}_{18}$	(263–279)	56.2		A, MG	[31/4]
$\text{C}_8\text{H}_{18}\text{N}_2\text{O}_2$	solid phase transition	2.0	(153)		[84/25]
$\text{C}_8\text{H}_{18}\text{N}_2\text{O}_2$	1,4-bis-(2-hydroxyethyl)piperazine (334–356)	104.1			[122-96-3] [84/30]
$\text{C}_8\text{H}_{18}\text{O}$	1-octanol	105.4±2.5	(244)		[111-87-5] [65/6]
$\text{C}_8\text{H}_{18}\text{O}_2$	1,8-octanediol	139.3±0.9	(298)	C	[629-41-4] [90/14]
$\text{C}_8\text{H}_{18}\text{O}_2\text{S}$	di- <i>n</i> -butyl sulfone	100.4±2.5			[598-04-9] [U/3][70/1]
$\text{C}_8\text{H}_{18}\text{O}_2\text{S}$	di- <i>tert</i> -butyl sulfone	94.1±2.9			[1886-75-7] [U/3][70/1]
$\text{C}_9\text{H}_5\text{BrClNO}$	7-bromo-5-chloro-8-hydroxyquinoline (353–368)	110.1±0.8 113.2±0.8	(361) (298)	ME	[7640-33-7] [92/20] [92/20]
$\text{C}_9\text{H}_5\text{Br}_2\text{NO}$	5,7-dibromo-8-hydroxyquinoline (365–380)	113.6±1.3 117.3±1.3 (363–393) 94.1	(372) (298)	ME	[521-74-4] [92/20] [92/20] [63/5]
$\text{C}_9\text{H}_5\text{ClINO}$	5-chloro-7-iodo-8-hydroxyquinoline (359–378)	111.3±0.4 114.8±0.4	(368) (298)	ME	[130-26-7] [92/20] [92/20]
$\text{C}_9\text{H}_5\text{ClINO}$	5-iodo-7-chloro-8-hydroxyquinoline (383–414)	131.0			[35048-13-6] [63/5]
$\text{C}_9\text{H}_5\text{Cl}_2\text{NO}$	5,7-dichloro-8-hydroxyquinoline (351–366)	106.3±0.7 109.3±0.7 (363–393) 92.9	(358) (298)	ME	[773-76-2] [92/20] [92/20] [63/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m / \text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>9</sub> H <sub>5</sub> I <sub>2</sub> NO	5,7-diiodo-8-hydroxyquinoline (389–404)	121.9±0.8 126.8±0.8	(396) (298)	ME	[83-73-8] [92/20] [92/20] [63/5]
	(403–423)	110.9			[130-16-5]
C <sub>9</sub> H <sub>6</sub> CINO	5-chloro-8-hydroxyquinoline (317–327)	97.5±0.9 98.7±0.9	(322) (298)	ME	[92/20] [92/20]
C <sub>9</sub> H <sub>6</sub> INO	5-iodo-8-hydroxyquinoline (363–393)	118.8		ME	[13207-63-1] [63/5]
C <sub>9</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	5-nitroquinoline (310–324)	93.2±0.7 94.2±0.7	(317) (298)	ME	[607-34-1] [97/2] [97/2]
C <sub>9</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	6-nitroquinoline (336–350)	101.5±1.0 103.8±1.0	(343) (298)	ME	[613-50-3] [97/2] [97/2]
C <sub>9</sub> H <sub>6</sub> N <sub>2</sub> O <sub>2</sub>	8-nitroquinoline (338–352)	104.3±0.9 106.7±0.9	(345) (298)	ME	[607-35-2] [97/2] [97/2]
C <sub>9</sub> H <sub>6</sub> N <sub>2</sub> O <sub>3</sub>	5-nitro-8-hydroxyquinoline (352–362)	114.1±2.2 111.2±3.0	(298) (298)	ME C	[4008-48-4] [89/2] [89/2]
C <sub>9</sub> H <sub>6</sub> O <sub>2</sub>	coumarin (293–353)	83.1 86.2	(298) (323)	C ME	[91-64-5] [91/12] [53/7][60/1] [87/4]
C <sub>9</sub> H <sub>6</sub> O <sub>2</sub>	chromone	81.3±0.2	(298)	C	[491-38-3] [88/13]
C <sub>9</sub> H <sub>6</sub> O <sub>6</sub>	1,3,5-benzenetricarboxylic acid (553–593)	159.4	(573)	GS	[554-95-0] [87/4][62/2]
C <sub>9</sub> H <sub>6</sub> S <sub>3</sub>	5-phenyl-1,2-dithiole-3-thione (363–373)	117.4±0.4 123.3±0.4	(368) (298)		[3445-76-9] [72/16] [72/16]
C <sub>9</sub> H <sub>7</sub> NO	2-hydroxyquinoline (375–390)	115.2±0.6 119.4±0.6	(383) (298)	ME	[59-31-4] [90/1] [90/1]
C <sub>9</sub> H <sub>7</sub> NO	4-hydroxyquinoline (415–433)	128.8±1.1 135.1±1.1	(424) (298)	ME	[611-36-9] [90/1] [90/1]
C <sub>9</sub> H <sub>7</sub> NO	8-hydroxyquinoline (293–303)	89.5±0.9 89.0±1.4 108.8±1.7	(298) (298) (298)	ME C ME	[148-24-3] [89/2] [89/2] [63/5][70/1] [87/4]
C <sub>9</sub> H <sub>7</sub> N <sub>3</sub> O <sub>2</sub>	5-amino-6-nitroquinoline (400–424)	130.7±0.8 136.4±0.8	(412) (298)	ME	[35975-00-9] [98/11] [98/11]
C <sub>9</sub> H <sub>7</sub> NO	Ω-cyanoacetophenone (318–333)	99.8 92.5±4.2	(325.5)		[614-16-4] [87/4] [69/9][77/1]
C <sub>9</sub> H <sub>7</sub> NO <sub>2</sub>	N-methylphthalimide (298–316)	91.1±0.5 91.1±0.5	(307) (298)	ME	[550-44-7] [97/12] [97/12]
C <sub>9</sub> H <sub>8</sub> N <sub>2</sub>	3-aminoquinoline (329–345)	101.1±0.9 103.1±0.9 104.8±4.8	(337) (298) (298)	ME C	[580-17-6] [93/10] [93/10] [93/10]
C <sub>9</sub> H <sub>8</sub> N <sub>2</sub>	5-aminoquinoline (329–349)	102.9±0.7 105.0±0.7 103.3±3.4	(339) (298) (298)	ME C	[611-34-7] [93/10] [93/10] [93/10]
C <sub>9</sub> H <sub>8</sub> N <sub>2</sub>	6-aminoquinoline (333–349)	103.6±1.0 105.7±1.0	(341) (298)	ME	[580-15-4] [93/10] [93/10]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_9\text{H}_8\text{N}_2$	8-aminoquinoline (329–314)	93.0 93.3±0.5	(305) (298)	ME	[578-66-5] [93/10] [93/10]
$\text{C}_9\text{H}_8\text{N}_2\text{O}$	2-methyl-3-hydroxyquinoxaline (375–391)	117.2±0.4 119.7±2.8 123.0±4.4	(383) (298) (298)	ME ME C	[14003-34-0] [00/26] [00/26] [00/15]
$\text{C}_9\text{H}_8\text{N}_2\text{O}_2$	2-methylquinoxaline-1,4-dioxide	107.0±6.2	(298)	C	[6639-86-7] [97/25]
$\text{C}_9\text{H}_8\text{N}_2\text{O}_2$	3-methylaminophthalimide (402–450)	104.9	(417)	RG	[5972-09-8] [87/4][56/13]
$\text{C}_9\text{H}_8\text{O}$	1-indanone (288–308)	83.5±0.7	(298)	GS	[83-33-0] [98/21]
$\text{C}_9\text{H}_8\text{O}_2$	<i>trans</i> -cinnamic acid (333–347)	105.0±0.8 107.1±0.8	(340) (298)	ME ME	[140-10-3] [99/27] [99/27]
$\text{C}_9\text{H}_8\text{O}_2\text{S}$	phenyl propadienyl sulfone	105.4±2.5			[2525-42-0] [69/13][70/1]
$\text{C}_9\text{H}_8\text{O}_2\text{S}$	phenyl prop-1-ynyl sulfone	95.4±2.5		B	[2525-41-9] [69/13][70/1]
$\text{C}_9\text{H}_8\text{O}_2\text{S}$	phenyl prop-2-ynyl sulfone	105.±2.5		B	[2525-40-8] [69/13][70/1]
$\text{C}_9\text{H}_8\text{O}_3$	<i>endo</i> -5-norbornene-2,3-dicarboxylic anhydride	97±4.2	(298)	MG	[129-64-6] [73/17][77/1]
$\text{C}_9\text{H}_8\text{O}_4$	monomethyl terephthalate (433–493)	72.1 82.8 130.4	(448) (473)	GS	[1679-64-7] [87/4] [62/2] [98/28]
$\text{C}_9\text{H}_9\text{N}$	2,6-dimethylbenzonitrile	83.9±2.8	(298)	C	[21789-36-6] [91/3]
$\text{C}_9\text{H}_9\text{N}$	3-methylindole (288–333)	83.3	(303)		[83-34-1] [87/4]
$\text{C}_9\text{H}_9\text{NO}_2$	4-acetomidobenzaldehyde (328–346)	99	(337)		[122-85-0] [87/4][60/21]
$\text{C}_9\text{H}_9\text{N}_3\text{O}_6$	2,4,6-trinitromesitylene (319–397)	103.6±1.2		ME	[602-96-0] [87/4][78/15]
$\text{C}_9\text{H}_{10}\text{Cl}_2\text{N}_2\text{O}$	3-(3,4-dichlorophenyl)-1,1-dimethylurea (diuron)	119±0.6 133.9±0.7	(393) (298)	C	[330-54-1] [97/17] [97/17]
$\text{C}_9\text{H}_{10}\text{N}_2\text{O}$	1-phenyl-3-pyrazolidinone (327–348)	84.3	(337.5)		[92-43-3] [87/4][60/21]
$\text{C}_9\text{H}_{10}\text{O}$	<i>trans</i> 3-phenyl-2-propen-1-ol (288–307)	109.6 69.5	(297.5)		[4407-36-7] [87/4] [54/4]
$\text{C}_9\text{H}_{10}\text{O}_2$	2-ethylbenzoic acid (298–313)	100.5 101.1±0.4 100.7±2.5	(305.5) (298) (298)	ME ME ME	[612-19-1] [87/4][76/6] [84/1] [76/6]
$\text{C}_9\text{H}_{10}\text{O}_2$	3-ethylbenzoic acid (300–318)	99.1 99.7±0.4 99.1±2.5	(309) (298) (298)	ME ME ME	[619-20-5] [87/4][76/6] [84/1] [76/6]
$\text{C}_9\text{H}_{10}\text{O}_2$	4-ethylbenzoic acid (310–329)	98.2 98.9±0.2 97.6±0.2 97.5±2.5	(319.5) (298) (321) (298)	ME ME ME ME	[619-64-7] [87/4][76/6] [84/1] [84/1] [76/6]
$\text{C}_9\text{H}_{10}\text{O}_2$	4-acetylanisole (276–300)	77.7		V	[100-06-1] [59/2]
$\text{C}_9\text{H}_{10}\text{O}_2$	2,3-dimethylbenzoic acid (316–337)	93.7	(308)	ME	[54/4][60/1] [87/4] [603-79-2] [84/9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_9\text{H}_{10}\text{O}_2$	2,4-dimethylbenzoic acid (312–331)	104.6±0.4	(298)	ME	[84/9] [611-01-8]
		102.7±0.3	(321)	ME	[84/9]
		103.5±0.3	(298)	ME	[84/9]
$\text{C}_9\text{H}_{10}\text{O}_2$	2,5-dimethylbenzoic acid (315–334)	103.6±0.6	(324)	ME	[610-72-0] [84/9]
		105.0±0.6	(298)	ME	[84/9]
$\text{C}_9\text{H}_{10}\text{O}_2$	2,6-dimethylbenzoic acid (309–324)	98.2±0.2	(317)	ME	[632-46-2] [84/9]
		99.1±0.2	(298)	ME	[84/9]
$\text{C}_9\text{H}_{10}\text{O}_2$	3,4-dimethylbenzoic acid (325–347)	104.5±0.3	(336)	ME	[619-04-5] [84/9]
		106.4±0.3	(298)	ME	[84/9]
$\text{C}_9\text{H}_{10}\text{O}_2$	3,5-dimethylbenzoic acid (322–341)	100.8±0.3	(332)	ME	[499-06-9] [84/9]
		102.3±0.3	(298)	ME	[84/9]
$\text{C}_9\text{H}_{10}\text{O}_2$	3-methylphenyl acetate (274–317)	60.7	(295)	TE	[122-46-3] [47/1][60/1]
$\text{C}_9\text{H}_{10}\text{O}_2\text{S}$	p-tolyl vinyl sulfone	82.4±2.5		B	[5535-52-4] [69/1][77/1]
$\text{C}_9\text{H}_{10}\text{O}_3$	3-ethoxy-4-hydroxybenzaldehyde (296–338)	101.5	(311)		[121-32-4] [87/4][57/3] [60/1]
$\text{C}_9\text{H}_{10}\text{O}_4$	2,3-dimethoxybenzoic acid (336–356)	115.1±0.3	(346)	ME	[1521-38-6] [85/1]
		116.6±0.3	(298)	ME	[85/1]
$\text{C}_9\text{H}_{10}\text{O}_4$	2,4-dimethoxybenzoic acid (346–367)	120.5±0.4	(357)	ME	[91-52-1] [85/1]
		123.4±0.4	(298)	ME	[85/1]
$\text{C}_9\text{H}_{10}\text{O}_4$	2,6-dimethoxybenzoic acid (335–378)	118.4±0.4	(367)	ME	[1466-76-8] [85/1]
		121.7±0.4	(298)	ME	[85/1]
$\text{C}_9\text{H}_{10}\text{O}_4$	3,4-dimethoxybenzoic acid (359–378)	126.1±0.6	(369)	ME	[93-07-2] [85/1]
		129.8±0.6	(298)	ME	[85/1]
$\text{C}_9\text{H}_{10}\text{O}_4$	2,5-dimethoxybenzoic acid (324–342)	113.3±0.7	(333)	ME	[2785-98-0] [96/15]
		116.1±0.7	(298)	ME	[96/15]
$\text{C}_9\text{H}_{10}\text{O}_4$	3,5-dimethoxybenzoic acid (356–376)	124.5±0.6	(369)	ME	[1132-21-4] [85/1]
		127.1±0.6	(298)	ME	[85/1]
$\text{C}_9\text{H}_{10}\text{O}_5$	2-(diacetoxymethyl)furan	109.6±2.5			[613-75-2] [80/28][86/5]
$\text{C}_9\text{H}_{11}\text{ClN}_2\text{O}$	3-(4-chlorophenyl)-1,1-dimethylurea (303–379)	114.6±4.9	(341)	ME,C	[150-68-5] [87/4][72/9]
$\text{C}_9\text{H}_{11}\text{NO}$	N-(2-methylphenyl)acetamide (315–340)	96.8	(327.5)		[120-66-1] [87/4][60/21]
$\text{C}_9\text{H}_{11}\text{NO}$	N-(4-methylphenyl)acetamide (331–350)	99.0	(341)		[103-89-9] [60/21]
$\text{C}_9\text{H}_{11}\text{NO}$	N,N-dimethylbenzamide (289–305)	89.7±0.3	(298)		[611-74-5] [95/11]
$\text{C}_9\text{H}_{11}\text{NO}_2$	2,4,6-trimethylnitrobenzene	78.6±1.0	(298)	C	[603-71-4] [93/3][93/21]
$\text{C}_9\text{H}_{11}\text{NO}_2$	L-(l)-phenylalanine (342–442)	U 90±6.3	(392)	LE	[63-91-2] [77/2]
		154±8	(455)	ME	[65/1][70/1] [87/4][64/16]
$\text{C}_9\text{H}_{11}\text{NO}_3$	L-tyrosine (412–512)	101±8	(462)	LE	[60-18-4] [77/2]
$\text{C}_9\text{H}_{11}\text{NS}$	N,N-dimethylthiobenzamide	94.8±2.0	(298)	C	[15482-60-7] [89/11]
$\text{C}_9\text{H}_{13}\text{ClN}_6$	2-[4-chloro-6-ethylamino-s-triazin-2-yl]amino]-2-methylpropionitrile (cyanazine)				[21725-46-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(339–365)	90.7	(352)	GS	[82/23]
$\text{C}_9\text{H}_{12}\text{F}_3\text{N}_3\text{O}_5$	N-[N-(N-[trifluoroacetyl]glycyl)glycyl]glycine methyl ester				[651-18-3]
	(343–433)	133.4	(358)		[87/4][60/20]
$\text{C}_9\text{H}_{12}\text{N}_2$	N-methyl-7-(methylimino)-1,3,5-cycloheptatrienylamine				[1502-10-9]
		49.4±4			[71/3][77/1]
$\text{C}_9\text{H}_{12}\text{N}_2\text{O}_2$	3-ethoxyphenylurea	75.3±8.3		E	[13142-86-4] [54/12][70/1]
$\text{C}_9\text{H}_{12}\text{N}_2\text{O}_2$	4-ethoxyphenylurea	83.7±8.3		E	[150-69-6] [54/12][70/1]
$\text{C}_9\text{H}_{12}\text{O}$	2,3,6-trimethylphenol	86.7±0.6	(298)	GS	[2416-94-6] [99/17]
$\text{C}_9\text{H}_{12}\text{O}$	2,4,6-trimethylphenol	82.8±0.3	(298)	GS	[527-60-6] [99/17]
		95.0	(298)	C	[71/24][99/17]
$\text{C}_9\text{H}_{12}\text{O}$	$\alpha,\alpha$ -dimethylbenzyl alcohol	82.8±0.7	(289)	GS	[617-94-7] [99/18]
	(276–302)	82.3±0.7	(298)		[99/18]
$\text{C}_9\text{H}_{12}\text{O}_2$	3-isopropyl-1,2-dihydroxybenzene	97.8±1.7	(298)	C	[2138-48-9] [84/10]
$\text{C}_9\text{H}_{12}\text{O}_2$	1,2,3-trimethoxybenzene	98.0±0.3	(298)	C	[634-36-6] [00/24]
$\text{C}_9\text{H}_{12}\text{O}_2$	1,3,5-trimethoxybenzene	100.6±1.9	(298)	C	[621-23-8] [00/24]
$\text{C}_9\text{H}_{13}\text{N}_5$	6,9-dimethyl-8-ethyladenine	94.1±0.1	(348)	ME	[13909-52-7] [94/6]
$\text{C}_9\text{H}_{13}\text{N}_5$	8-propyl-9-methyladenine	124.2±0.8	(367)	ME	[117954-97-9] [87/7]
$\text{C}_9\text{H}_{14}$	bicyclo[3.2.2]non-6-ene	48±1.0	(298)	C	[7124-86-9] [82/4]
$\text{C}_9\text{H}_{14}$	bicyclo[3.3.1]non-2-ene	48.2±0.4	(298)	C	[6671-66-5] [82/4]
$\text{C}_9\text{H}_{14}$	bicyclo[4.2.1]non-3-ene	49.7±0.8	(298)	C	[1456-33-0] [82/4]
$\text{C}_9\text{H}_{14}\text{N}_2\text{O}_2$	1,3-dimethyl-5-propyluracil	111.0±1.6	(322)	ME	[82413-39-6] [96/5]
$\text{C}_9\text{H}_{14}\text{N}_2\text{O}_2$	1,3-dimethyl-5-isopropyluracil	102.9±1.6	(322)	ME	[175412-48-3] [96/5]
$\text{C}_9\text{H}_{14}\text{N}_2\text{O}_2$	1,3-diethylthymine	89.8±0.4	(298)	C	[21472-93-5] [80/7]
	(307–325)	95.0±2.1	(317)	QR	[80/19]
$\text{C}_9\text{H}_{16}$	bicyclo[3.3.1]nonane	50.6±2	(298)	TSGC	[260-65-9] [77/9]
$\text{C}_9\text{H}_{16}\text{ClN}_5$	2-chloro-4,6-bis(isopropylamino)-1,3,5-triazine				[139-40-2]
	(323–403)	125.1	(338)	GS–GC	[87/4][64/14]
$\text{C}_9\text{H}_{16}\text{NO}_2$	2,2,6,6-tetramethyl-4-oxopiperidine-1-oxyl				[2896-70-0] [65/7][70/1]
		83.3±1.7		ME	[87/4]
$\text{C}_9\text{H}_{16}\text{N}_2$	2-methyl-2-piperidinopropionitrile	80.3±0.5	(298)		[2273-41-8] [97/28]
$\text{C}_9\text{H}_{16}\text{O}_4$	nonanedioic acid				[123-99-9]
	(367–377)	156.2±0.5	(372)	ME	[99/10]
		159.9±1.0	(298)		[99/10]
$\text{C}_9\text{H}_{17}\text{NO}$	2,2,6,6-tetramethyl-4-oxopiperidine	60.8±2.7		ME	[2896-70-0] [66/4][70/1]
$\text{C}_9\text{H}_{17}\text{NO}$	<i>trans</i> 2-nonenoic acid amide				[14952-05-7]
	(383–393)	111.9	(388)		[87/4]
$\text{C}_9\text{H}_{17}\text{NO}_2$	2,2,6,6-tetramethyl-1-hydroxy-4-oxopiperidine				[3637-11-4]
	(288–328)	80	(303)		[87/4]
		80.1±4.6		ME	[65/7][70/1]
$\text{C}_9\text{H}_{17}\text{N}_5\text{O}$	2-methoxy-4-ethylamino-6-isopropylamino-1,3,5-triazine				[1610-17-9]
	(323–403)	94.4	(338)	GS–GC	[87/4][64/14]
$\text{C}_9\text{H}_{17}\text{N}_5\text{S}$	2-methylthio-4-ethylamino-6-isopropylamino-1,3,5-triazine				[834-12-8]
	(323–403)	100.9	(338)	GS–GC	[87/4][64/14]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_9\text{H}_{18}\text{NO}_2$	2,2,6,6-tetramethyl-4-hydroxypiperidine-1-oxyl (293–318)	$101.5 \pm 5.2$	(306)	ME	[2226-96-2] [66/4][70/1]
$\text{C}_9\text{H}_{18}\text{N}_2\text{OS}$	N,N-diethyl-N'-isobutanoylthiourea (363)	$120.8 \pm 2.5$	(298)	C	[01/9]
$\text{C}_9\text{H}_{18}\text{N}_2\text{O}_2\text{S}$	3,3-dimethyl-1-(methylthio)-2-butanone O-((methylamino)carboxyl)-oxime (298–328)	$93.5 \pm 6$	(308)	ME	[39196-18-4] [87/4][76/11]
$\text{C}_9\text{H}_{18}\text{O}_3$	di- <i>tert</i> -butylcarbonate	$65.4 \pm 0.2$	(298)	C	[34619-03-9] [85/17]
$\text{C}_9\text{H}_{19}\text{NO}$	nonamide (353–370)	$114.6 \pm 3.3$		ME	[1120-07-6] [59/3]
$\text{C}_9\text{H}_{19}\text{NO}_2$	2,2,6,6-tetramethyl-1,4-dihydroxypiperidine (318–348)	$100.4 \pm 0.6$	(328)	ME	[3637-10-3] [66/4][70/1]
$\text{C}_9\text{H}_{20}$	<i>n</i> -nonane	74.6 71.4	(219) (298)	B H	[111-84-2] [63/6] [63/6][93/16]
$\text{C}_9\text{H}_{20}\text{N}_2\text{S}$	1,3-dibutylthiourea	$141.0 \pm 2$ $137 \pm 3.0$	(298) (298)	B,HA C	[109-46-6] [00/23] [94/17]
$\text{C}_9\text{H}_{20}\text{N}_2\text{S}_2$	diethylammonium diethyldithiocarbamate	$111.8 \pm 3.0$			[1518-58-7] [79/14]
$\text{C}_9\text{H}_{20}\text{O}$	di- <i>tert</i> -butylmethanol	$62.7 \pm 0.9$	(298)		[14609-79-1] [98/22]
$\text{C}_9\text{H}_{20}\text{O}_2$	1,9-nonanediol	148.7			[3937-56-2] [90/14]
$\text{C}_{10}\text{F}_8$	octafluoronaphthalene (293–323)	$79.4 \pm 2.5$	(308)	ME	[313-72-4] [87/4][74/9]
$\text{C}_{10}\text{H}_2\text{O}_6$	1,2,4,5-benzenetetracarboxylic dianhydride (pyromellitic dianhydride)	100.4 88.4	(559)		[89-32-7] [75/11] [67/15]
$\text{C}_{10}\text{H}_6\text{BrNO}_2$	1-(4-bromophenyl)-1 <i>H</i> -pyrrole-2,5-dione (350–370)	$105.9 \pm 0.7$		C	[13380-67-1] [98/25]
$\text{C}_{10}\text{H}_6\text{Cl}_4\text{O}_4$	dimethyltetrachloroterephthalane (chlorthal) (348–433)	$104.9 \pm 1.4$	(390)	ME,GS	[1861-32-1] [81/20]
$\text{C}_{10}\text{H}_6\text{N}_2$	2-cyanoquinoline	$89.3 \pm 3.3$ 93.4±0.7 94.4±0.7	(298) (319) (298)	C ME	[1436-43-7] [95/14] [95/14] [95/14]
$\text{C}_{10}\text{H}_6\text{N}_2$	3-cyanoquinoline	$91.3 \pm 1.8$ 93.4±0.7 93.2±0.8	(298) (319) (298)	C ME	[34846-64-5] [95/14] [95/14] [95/14]
$\text{C}_{10}\text{H}_6\text{N}_2\text{O}_4$	1-(3-nitrophenyl)-1 <i>H</i> -pyrrole-2,5-dione (350–370)	$115.7 \pm 0.9$		C	[7300-93-8] [98/25]
$\text{C}_{10}\text{H}_6\text{N}_2\text{O}_4$	1-(4-nitrophenyl)-1 <i>H</i> -pyrrole-2,5-dione (350–370)	$117.3 \pm 1.2$		C	[4338-06-1] [98/25]
$\text{C}_{10}\text{H}_6\text{O}_2$	1,4-naphthoquinone	$91.0 \pm 0.8$ 90.7±2 72.4±3.8	(298) (313)	C TE,ME	[130-15-4] [89/21] [81/4] [56/5][70/1] [21414-85-7]
$(\text{C}_{10}\text{H}_6\text{O}_2)_-$ $(\text{C}_{10}\text{H}_8\text{O}_2)_-$	(1,4-naphthoquinone)-(1,4-naphthohydroquinone)				
$2(\text{C}_{10}\text{H}_6\text{O}_2)_-$ $(\text{C}_{10}\text{H}_8\text{O}_2)_-$	(330–351)	$102.3 \pm 2$	(342.4)	ME,TE	[81/4] [66653-77-8]
$\text{C}_{10}\text{H}_7\text{Br}$	2-bromonaphthalene	$88.7 \pm 3$	(328.5)	ME,TE	[580-13-2] [81/4] [93/13]
$\text{C}_{10}\text{H}_7\text{Cl}_7$	dihydroheptachlor	$81.2 \pm 1.0$	(298)		[81/6] [2589-15-3]
$\text{C}_{10}\text{H}_7\text{F}_3\text{O}_2$	benzoyltrifluoracetone	$64 \pm 5$	(298)	TE,ME	[87/4][74/36]
$\text{C}_{10}\text{H}_7\text{I}$	2-iodonaphthalene	$83.8$	(343)	ME	[326-06-7]
		$87.1 \pm 0.9$	(298)	ME	[92/28]
					[612-55-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		90.8			[56/10]
C <sub>10</sub> H <sub>7</sub> NO <sub>2</sub>	1-nitronaphthalene				[86-57-7]
	(309–326)	68.5±1.9	(318)	ME	[87/4][74/9]
	(325–332)	106.9±2.1	(328.5)	ME	[87/4][50/2]
					[70/1]
C <sub>10</sub> H <sub>7</sub> NO <sub>2</sub>	1-nitroso-2-naphthol	86.6±4.2		ME	[131-91-9]
C <sub>10</sub> H <sub>7</sub> NO <sub>2</sub>	2-nitroso-1-naphthol	56.5±4.2		ME	[132-53-6]
C <sub>10</sub> H <sub>7</sub> NO <sub>2</sub>	4-nitroso-1-naphthol	87.4±4.2		ME	[605-60-7]
C <sub>10</sub> H <sub>7</sub> NO <sub>2</sub>	1-phenyl-1-H-pyrrole-2,5-dione				[68/6][77/1]
	(350–370)	98.1±1		C	[941-69-5]
C <sub>10</sub> H <sub>8</sub>	azulene				[98/25]
	(283–326)	78.4±1.3	(303)	HSA	[275-51-4]
		72.7	(298)	CGC-DSC	[98/5]
	(290–372)	82.8	(305)		[87/4]
		82.9	(298)		[87/4][93/16]
	(253–293)	75.8	(273)		[58/1]
		75.3	(298)		[58/1][93/16]
		76.8±0.2		C	[72/1]
	(293–323)	95.4±0.4	(298)	ME	[62/1][70/1]
		67.6			[47/7]
C <sub>10</sub> H <sub>8</sub>	naphthalene				[91-20-3]
		70.4	(298)	CGC-DSC	[98/5]
	(313–353)	71.7	(333)	GS	[95/7]
	(243–273)	73.7±1.0	(258)	GS	[94/1]
	(337–352)	78.2±1		GC	[88/29]
		70.9±0.4	(323)	DSC	[88/4]
		72.3±0.4	(298)	DSC	[88/4]
	(283–323)	75.8±1.1	(303)	GS	[83/11]
		72.6±0.4		DSC	[83/8]
		72.6±0.1	(298)	TE,ME,DM	[83/1][81/1]
	(302–352)	72.8	(327)	GS	[82/23]
	(271–285)	72.8±0.3		ME	[82/1]
		72.4±0.7	(298)	C	[82/3]
	(274–353)	72.5±0.1		DM	[81/1]
	(253–273)	72.6±0.6		TE	[80/1]
	(280–305)	71.3	(293)	GS	[79/27]
	(253–273)	74.77±0.4		TE	[77/4]
	(253–273)	73.9±0.2		ME	[77/4]
	(303–329)	74.35±1.7		TSGC	[75/1]
		72.3±0.4		C	[76/1]
	(263–343)	72.5±0.3		DM	[75/4]
	(263–298)	67.8±3.5	(280)	HSA	[75/3]
		72.5	(298)	GS	[74/19]
	(281–297)	72.7±1.7	(289)	ME	[74/9]
	(281–290)	64±.5		LE	[73/15]
		72.1±0.25	(298)	C	[72/1]
		73.0±0.3	(298)	C	[72/2]
	(283–323)	72.7		ME	[71/31]
		66.5			[68/1]
	(230–260)	72.7±0.3		KG	[63/1][70/1]
	(276–283)	66.3		V	[59/2]
	(283–303)	65.8	(293)	ME	[58/18]
	(253–283)	69.2	(268)		[58/1]
	(273–311)	72.1	(292)		[57/9]
	(279–294)	72.4			[53/1][60/1]
					[54/10]
		64.0	(298)	ME	[51/12]
	(288–306)	65.7	(297)	ME	[40/1]
		66.5±1.7	(298)	QF	[38/1]
	(237–276)	76.6			[26/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{10}\text{D}_8$	(283–303)	82.0	(293)	ME	[25/3]
	naphthalene-d <sub>8</sub>				[1146-65-2]
$\text{C}_{10}\text{H}_8\text{Br}_2\text{N}_2$	(282–323)	70.6±0.5	(303)	GS	[83/11]
	2,3-bis(bromomethyl)quinoxaline				[3138-86-1]
$\text{C}_{10}\text{H}_8\text{NO}_2$	(351–365)	111.7±0.5	(358)	ME	[00/26]
		114.0±2.0	(298)	ME	[00/26]
$\text{C}_{10}\text{H}_8\text{N}_2$	indole-3-acetic acid				[87-51-4]
	(313–423)	64.0±1.5	(368)	ME	[88/4]
$\text{C}_{10}\text{H}_8\text{N}_2$	2,2'-bipyridine				[366-18-7]
		81.8±2.3	(298)	C	[95/26]
		75.0±5.0	(298)	B	[96/24]
		81.9±0.3			[85/6]
$\text{C}_{10}\text{H}_8\text{N}_2$	2,4'-bipyridine				[581-47-5]
		87.9±1.7	(298)	C	[95/26]
$\text{C}_{10}\text{H}_8\text{N}_2$	4,4'-bipyridine				[553-26-4]
		106.3±2.8	(298)	C	[95/26]
$\text{C}_{10}\text{H}_8\text{N}_2\text{O}_2$	8-nitroquinaldine				[881-07-2]
	(346–360)	108.3±0.8	(353)	ME	[97/2]
$\text{C}_{10}\text{H}_8\text{N}_2\text{O}_3$	3-acetamidophthalimide				[6118-65-6]
	(428–468)	108.5	(443)	RG	[87/4][56/13]
$\text{C}_{10}\text{H}_8\text{O}$	1-naphthol				[90-15-3]
	(296–313)	91.2±0.4		ME	[74/3]
	(279–328)	89.1±1.7	(304)	ME	[74/5]
		91.5±3.8	(298)	B	[26/1][70/1]
					[27/1]
$\text{C}_{10}\text{H}_8\text{O}$	1-naphthol ( $\alpha$ form)				[87/4][60/14]
	(298–312)	93.3	(305)		
$\text{C}_{10}\text{H}_8\text{O}$	1-naphthol ( $\beta$ form)				[87/4][60/14]
	(314–324)	84.3	(319)		[135-19-3]
$\text{C}_{10}\text{H}_8\text{O}$	2-naphthol				
	(305–323)	94.2±0.5		ME	[74/3]
	(277–324)	87.4±2.5	(300)	ME	[74/5]
	(283–323)	78.7±0.8	(298)		[68/1][77/1]
					[87/4]
		83.0±3.8	(298)	B	[26/1][27/1]
					[70/1]
$\text{C}_{10}\text{H}_8\text{O}$	2-naphthol ( $\alpha$ form)				[87/4][60/14]
	(298–312)	97.8	(305)		
$\text{C}_{10}\text{H}_8\text{O}$	2-naphthol ( $\beta$ form)				[87/4][60/14]
	(314–332)	87.8	(323)		[4759-11-9]
$\text{C}_{10}\text{H}_8\text{O}$	1,6-oxido[10]annulene				[69/7][77/1]
		80.4±8.4		B	[571-60-8]
$\text{C}_{10}\text{H}_8\text{O}_2$	1,4-naphthohydroquinone				[81/4]
		119±1	(381)	ME,TE	[574-00-5]
$\text{C}_{10}\text{H}_8\text{O}_2$	1,2-dihydroxynaphthalene				[88/9]
		109.3±0.9	(298)	C	[132-86-5]
$\text{C}_{10}\text{H}_8\text{O}_2$	1,3-dihydroxynaphthalene				[88/9]
		116.0±1.1	(298)	C	[92-44-4]
$\text{C}_{10}\text{H}_8\text{O}_2$	2,3-dihydroxynaphthalene				[88/9]
		109.6±1.0	(298)	C	[79/5]
	(341–359)	109.4±0.5	(350)	ME	[134-32-7]
$\text{C}_{10}\text{H}_9\text{N}$	1-naphthylamine				[47/1][70/1]
		90.0±4.2		TE	[91-59-8]
$\text{C}_{10}\text{H}_9\text{N}$	2-naphthylamine				[87/4]
	(283–323)	73.9	(298)		[68/1][77/1]
		74.1±1.7			[47/2][70/1]
$\text{C}_{10}\text{H}_9\text{NO}$	$\beta$ -cyanopropiophenone				[5343-98-6]
		101.7±4.2		ME	[69/9][77/1]
	(318–333)	108.5	(325.5)		[87/4]
$\text{C}_{10}\text{H}_9\text{NO}$	2-methyl-8-hydroxyquinoline				[826-81-3]
	(424–442)	132.2±1.0	(433)	ME	[90/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		139.0±1.0	(298)		[90/1]
	(296–307)	90.4±0.7		ME	[89/2]
		87.2±1.9		C	[89/2]
	(308–333)	87.9		ME	[87/4][63/5]
C <sub>10</sub> H <sub>9</sub> NO	4-methyl-2-hydroxyquinoline				[607-66-9]
	(391–405)	123.1±1.6	(398)	ME	[90/1]
		128.1±1.6	(298)		[90/1]
C <sub>10</sub> H <sub>9</sub> NO <sub>2</sub>	indole-3-acetic acid				[87-51-4]
	(313–423)	64.0±1.4 U	(368)	ME	[88/14]
C <sub>10</sub> H <sub>10</sub>	bullvalene				[1005-51-2]
		71.8	(298)	C	[81/2]
C <sub>10</sub> H <sub>10</sub>	1,4-dihydronaphthalene				[612-17-9]
		63.6±1.6	(298)		[99/19]
C <sub>10</sub> H <sub>10</sub> N <sub>2</sub>	2,3-dimethylquinoxaline				[2379-55-7]
	(294–308)	87.7±0.4	(301)	ME	[00/26]
		87.8±0.4	(298)	ME	[00/26]
		85.8±1.8	(298)	C	[96/28]
C <sub>10</sub> H <sub>10</sub> N <sub>2</sub>	4-aminoquinaldine				[6628-04-2]
	(352–373)	112.1±0.8	(363)	ME	[98/11]
		115.3±0.8	(298)		[98/11]
C <sub>10</sub> H <sub>10</sub> N <sub>2</sub>	1-benzylimidazole				[4238-71-5]
		102.1±0.4	(298)	ME	[99/20]
C <sub>10</sub> H <sub>10</sub> N <sub>2</sub> O <sub>2</sub>	3-dimethylaminophthalimide				[87/4][56/13]
	(392–431)	90.9	(407)	RG	[93-91-4]
C <sub>10</sub> H <sub>10</sub> O <sub>2</sub>	1-phenyl-1,3-butanedione				[92/28]
		91.0±0.6	(298)	ME	[87/4][59/2]
	(278–300)	83.7	(289)	V	[16192-08-8]
C <sub>10</sub> H <sub>10</sub> O <sub>2</sub> S	p-tolyl propadienyl sulfone				[69/13][70/1]
		113±2.5		B	[14027-53-3]
C <sub>10</sub> H <sub>10</sub> O <sub>2</sub> S	p-tolyl prop-1-ynyl sulfone				[69/13][70/1]
		103.3±2.5		B	[16192-07-7]
C <sub>10</sub> H <sub>10</sub> O <sub>2</sub> S	p-tolyl prop-2-ynyl sulfone				[69/13][70/1]
		107.5±2.5		B	[14737-91-8]
C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	cis-2-methoxycinnamic acid				[99/27]
	(339–352)	119.3±0.6	(346)	ME	[99/27]
	(339–352)	121.7±0.6	(298)	ME	[99/27]
C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	trans-2-methoxycinnamic acid				[6099-03-2]
	(368–382)	124.9±0.6	(375)	ME	[99/27]
	(368–382)	128.8±0.6	(298)	ME	[99/27]
C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	trans-3-methoxycinnamic acid				[6099-04-3]
	(353–367)	120.9±0.9	(360)	ME	[99/27]
	(353–367)	124.0±0.9	(298)	ME	[99/27]
C <sub>10</sub> H <sub>10</sub> O <sub>3</sub>	trans-4-methoxycinnamic acid				[830-09-1]
	(369–383)	130.2±1.0	(376)	ME	[99/27]
	(369–383)	134.0±1.0	(298)	ME	[99/27]
C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	dimethyl isophthalate				[120-61-6]
	(295–309)	100.7±0.2	(302)	ME	[98/1]
		100.9±0.2	(298)		[98/1]
		100.7	(298)		[98/28]
C <sub>10</sub> H <sub>10</sub> O <sub>4</sub>	dimethyl terephthalate				[120-61-6]
	(311–330)	103.8±0.3	(321)	ME	[98/1]
		104.6±0.3	(298)		[98/1]
	(373–413)	94.4	(388)		[87/4]
	(373–413)	88.3	(393)	GS	[62/2]
		105.3			[98/28]
C <sub>10</sub> H <sub>11</sub> N	2,4,6-trimethylbenzonitrile				[2571-52-0]
		82.9±1.6	(298)	C	[91/3]
C <sub>10</sub> H <sub>11</sub> NO	2,4,6-trimethylbenzonitrile N-oxide				[2904-59-8]
		87.5±0.5	(314)	C	[93/12]
		87.9±1.9	(298)		[93/12]
	(300–338)	84.7±1.8	(319)	ME	[92/14]
		77.5±3.7	(298)	C	[91/3]
C <sub>10</sub> H <sub>11</sub> NO	3-amino-1-phenyl-but-2-enone				[1128-85-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		109.4±2.1	(298)	C	[93/24]
		91.9±1.9	(298)	C	[91/3]
C <sub>10</sub> H <sub>11</sub> NO <sub>2</sub>	N-phenyldiacetamide	90.±0.8	(298)	C	[1563-87-7]
C <sub>10</sub> H <sub>11</sub> NO <sub>3</sub>	2,4,6-trimethoxybenzonitrile	112.6±2.0	(298)	C	[65/8][70/1]
C <sub>10</sub> H <sub>11</sub> NO <sub>4</sub>	2,4,6-trimethoxybenzonitrile N-oxide	100.4±2.2	(298)	C	[2571-54-2]
C <sub>10</sub> H <sub>11</sub> N <sub>3</sub> O <sub>2</sub>	3-dimethylamino-6-aminophthalimide (434–459)	108.8	(446)	RG	[01/4]
C <sub>10</sub> H <sub>12</sub>	cyclodeca-1,2,6,7-tetraene	73.0±0.4	(298)	C	[10495-38-2]
C <sub>10</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	acetylglycine anilide (362–365)	122.1	(363.5)		[87/4][55/7]
C <sub>10</sub> H <sub>12</sub> O	4-phenylburytric acid (309–323)	112.4±0.8	(316)	ME	[1821-12-1]
		113.0±1.0	(298)	ME	[01/10]
C <sub>10</sub> H <sub>12</sub> O	4-methoxy- $\alpha$ -methylstyrene	81.2±0.4	(298)		[01/10]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2-phenyl-2-methyl-1,3-dioxolane (293–324)	81.9±0.5	(308)	T	[1712-69-2]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2,3,6-trimethylbenzoic acid (314–336)	104.4±0.2	(298)	ME	[95/13]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2,4,6-trimethylbenzoic acid (316–340)	103.6±0.2	(325)	ME	[87/15]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2,3,4-trimethylbenzoic acid (329–351)	103.6±0.3	(298)	ME	[87/15]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2,3,5-trimethylbenzoic acid (320–338)	102.5±0.3	(328)	ME	[87/15]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2,4,5-trimethylbenzoic acid (324–346)	106.7±0.3	(298)	ME	[1076-47-7]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	2,4,5-trimethylbenzoic acid (340–359)	105.7±0.3	(329)	ME	[87/15]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	3,4,5-trimethylbenzoic acid (300–320)	109.3±0.3	(298)	ME	[87/15]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	3-isopropylbenzoic acid (300–316)	108.2±0.3	(340)	ME	[2438-04-2]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	3-isopropylbenzoic acid (316–334)	106.7±0.3	(298)	ME	[87/11]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub>	4-isopropylbenzoic acid (316–334)	104.1±0.3	(298)	ME	[87/11]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub> S	p-tolyl trans-prop-1-enyl sulfone	111.0±0.5	(298)	ME	[32228-15-2]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub> S	p-tolyl prop-2-enyl sulfone	109.3±0.5	(350)	ME	[69/13][70/1]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub> S	p-tolyl isopropenyl sulfone	100.2±0.4	(310)	ME	[3112-87-6]
C <sub>10</sub> H <sub>12</sub> O <sub>2</sub> S	p-tolyl isopropenyl sulfone	101.0±0.4	(298)	ME	[67605-02-1]
C <sub>10</sub> H <sub>12</sub> O <sub>5</sub>	3,4,5-trimethoxybenzoic acid (354–372)	103.3±0.3	(308)	ME	[69/11][77/1]
C <sub>10</sub> H <sub>12</sub> O <sub>5</sub>	3,4,5-trimethoxybenzoic acid (354–372)	104.1±0.3	(298)	ME	[118-41-2]
C <sub>10</sub> H <sub>13</sub> NO	N,N-dimethyl-3-toluamide (373–405)	127.9±0.8	(363)	ME	[01/16]
C <sub>10</sub> H <sub>13</sub> NO <sub>2</sub>	p-phenacetin (4-ethoxyphenylacetamide) (312–387)	131.2±0.8	(298)	ME	[62-44-2]
C <sub>10</sub> H <sub>14</sub>	1,2,4,5-tetramethylbenzene	29.9	(388)	I	[72/9][87/4]
C <sub>10</sub> H <sub>14</sub>	1,2,4,5-tetramethylbenzene	115.5±2.4		C,ME	[95-93-2]
C <sub>10</sub> H <sub>14</sub>	1,2,4,5-tetramethylbenzene	71.7±0.3	(298)	C	[94/13]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{10}\text{H}_{14}$	(263–277)	74.6±0.3	(298)	ME	[89/18]
	(318–348)	71.3	(333)	A	[47/4]
		72.4	(298)	H	[47/4][93/16]
	1,2,3,4-tetramethylbenzene	52.6±0.2 (vap)	(298)	C	[488-23-3]
$\text{C}_{10}\text{H}_{14}$		55.6	(298)		[94/13]
	1,2,3,5-tetramethylbenzene	52.0±0.2 (vap)	(298)	C	[94/13]
		55.2	(298)		[94/13][90/23]
$\text{C}_{10}\text{H}_{14}\text{NO}_5\text{PS}$	ethyl parathion (O,O-diethyl-O-4-nitrophenylthiophosphate)				[56-38-2]
	(298–318)	100.6	(308)		[79/10][83/5]
$\text{C}_{10}\text{H}_{14}\text{N}_2\text{O}$	4-diethylaminonitrosobenzene				[120-22-9]
$\text{C}_{10}\text{H}_{14}\text{N}_2\text{O}_4$	2,2-dinitroadamantane	107.9±3.7	(298)	C	[98/23]
	(278–317)	96.4±1.4	(298)	T	[88381-75-3]
$\text{C}_{10}\text{H}_{14}\text{O}$	3- <i>tert</i> -butylphenol				[90/10]
	(278–319)	88.9±0.5	(298)	C	[585-34-2]
	(266–299)	86.0±0.5	(298)	GS	[99/21]
		70.7	(281)		[99/13]
$\text{C}_{10}\text{H}_{14}\text{O}$	4- <i>tert</i> -butylphenol				[87/4]
	(293–334)	85.9±0.5	(298)	C	[98-54-4]
		85.0±0.5	(313)	GS	[99/21]
		85.9±0.5	(298)		[99/13]
	(280–304)	84.3	(292)		[87/4][60/14]
$\text{C}_{10}\text{H}_{14}\text{O}$	thymol				[89-83-8]
	(273–295)	75.1	(284)		[87/4][60/14]
	(293–323)	89.1±4.5	(303)	HSA	[75/3]
	(229–312)	U 69.0	(270)	TGA	[71/17]
	(273–313)	91.2±4.1		TE	[70/1][60/1]
					[47/1]
$\text{C}_{10}\text{H}_{14}\text{O}$					[57/9][87/4]
	(283–323)	91.5	(298)		[700-58-3]
$\text{C}_{10}\text{H}_{14}\text{O}$	adamantan-2-one				[78/8]
	(320–370)	79.7±2.1	(345)	BG	[80.3±2.5]
		80.3±2.5	(298)	BG	[78/8]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	4- <i>tert</i> -butyl-1,2-dihydroxybenzene				[98-29-3]
	(303–323)	98.7±0.9	(313)	GS	[00/21]
		99.2±0.9	(298)	GS	[00/21]
		99.3±1.4	(298)	C	[84/20]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	2- <i>tert</i> -butyl-1,4-dihydroxybenzene				[1948-33-0]
	(333–368)	101.2±1.3	(351)	GS	[99/28]
		104.4±1.3	(298)		[99/28]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	3- <i>tert</i> -butyl-1,2-dihydroxybenzene				[4026-05-5]
	(334–384)	70.1±0.8 (liq)	(359)	GS	[00/21]
		73.5±0.8 (liq)	(298)	GS	[00/21]
$\text{C}_{10}\text{H}_{14}\text{O}_2$	6-methyl-3-isopropyl-1,2-dihydroxybenzene				[490-06-2]
		96.6±0.9	(298)	C	[84/20]
$\text{C}_{10}\text{H}_{15}\text{NO}$	( <i>dl</i> )-carboxime				[55658-55-4]
	(324–343)	101.6±5	(334)	HSA	[81/8]
$\text{C}_{10}\text{H}_{15}\text{NO}$	( <i>d</i> )-carboxime				[80124-30-7]
	(324–343)	90.8±4.5	(334)	HSA	[81/8]
$\text{C}_{10}\text{H}_{15}\text{NO}_2$	1-nitroadamantane				[7575-82-8]
	(321–357)	63.6±1.0	(339)	T	[90/10]
$\text{C}_{10}\text{H}_{15}\text{NO}_2$	2-nitroadamantane				[54654-31-7]
	(331–368)	58.0±2.3	(350)	T	[90/10]
$\text{C}_{10}\text{H}_{15}\text{N}_5$	6,9-dimethyl-8-propyladenine				[153495-35-3]
	(345–349)	129.0±0.1	(347)	ME	[94/6]
$\text{C}_{10}\text{H}_{15}\text{N}_5$	8-butyl-9-methyladenine				[117954-98-0]
	(363–368)	135.1±1.2	(366)	ME	[87/7]
$\text{C}_{10}\text{H}_{16}$	adamantane (tricyclo[3.3.1.1 <sup>2,6</sup> ]decane)				[281-23-2]
		59.1	(298)		[00/10]
		58.3	(308)		[00/4]
		52.6	(298)	CGC-DSC	[98/5]
	(278–368)	59.7	(293)		[87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(328–373)	55.3	(343)		[87/4]
	(343–483)	54.3	(358)		[87/4][68/18]
		58.45	(298)	C	[82/4]
	(278–443)	59.5	(300)		[75/30]
	(310–336)	59.7±0.8	(326)	TSGC	[75/2]
		58.6	(298)		[75/2][93/16]
	(310–336)	59.3±0.2	(326)	BG	[71/1]
		60.5±1.3	(298)		[71/1][93/16]
	(312–366)	53.6	(332)	I	[71/7]
		54.8	(298)		[71/7][93/16]
		59.3±0.16	(298)	C	[70/2]
		59.5	(298)		[70/16]
	(313–353)	58.6±0.6	(333)	DBM	[67/1]
		59.6	(298)		[67/1][93/16]
		62.3	(298)		[67/1]
C <sub>10</sub> H <sub>16</sub>	2,2-dimethyl-3-methylenecyclo[2.2.1]heptane (camphene)				[79-92-5]
		46.8		C	[77/12]
C <sub>10</sub> H <sub>16</sub>	tricyclo[4.3.1.0 <sup>3,8</sup> ]decane				[53130-19-1]
	(310–335)	64.9±1.8	(323)	TSGC	[75/2]
		65.6	(298)		[75/2][93/16]
C <sub>10</sub> H <sub>16</sub>	tricyclo[5.2.1.0 <sup>2,6</sup> ]decane				[6004-38-2]
	(359–443)	52.9±1.3	(298)	BG	[71/1][77/1]
C <sub>10</sub> H <sub>16</sub>	tricyclo[5.2.1.0 <sup>4,10</sup> ]decane hexahydrotriquinacene				[17760-91-7]
		56.6±1.3	(307)	TSGC	[79/13]
C <sub>10</sub> H <sub>16</sub> NOS	S-2,3,3-trichloroallyl N,N-diisopropylthiocarbonate (triallate)				[2303-17-5]
	(293–318)	84			[83/5][78/18]
C <sub>10</sub> H <sub>16</sub> N <sub>2</sub>	methyl(1,1,1-trimethylpropyl)propanedinitrile				[85688-96-6]
		62.0±0.7	(298)		[90/28]
C <sub>10</sub> H <sub>16</sub> N <sub>2</sub>	(1,1-dimethylpropyl)ethylpropanedinitrile				[85688-95-5]
		76.2±0.8	(298)		[90/28]
C <sub>10</sub> H <sub>16</sub> N <sub>2</sub> O <sub>2</sub>	1,3-dimethyl-5-butyluracil				[82413-40-9]
	(306–311)	106.3±1.3	(309)	ME	[96/5]
C <sub>10</sub> H <sub>16</sub> O	(dl)-camphor				[21368-68-3]
		51.8±0.8			[77/6]
	(273–293)	51.5±2.6	(283)	HSA	[75/3]
	(273–298)	U 65.8			[60/1][40/1]
		50.7			[60/1][37/2]
	(273–453)	53.6	(363)		[60/1][10/1]
	(285–318)	54.7	(301)		[57/9]
C <sub>10</sub> H <sub>16</sub> O	(d)-3-bornanone				[13854-85-8]
	(273–408)	54.2	(288)		[87/4]
	(323–339)	55	(331)		[87/4]
	(408–451)	49.8	(423)		[87/4]
C <sub>10</sub> H <sub>16</sub> O	cis-8-methyl-2-hydridanone				[13351-29-6]
		60.9±0.2	(298)	C	[70/6][77/1]
C <sub>10</sub> H <sub>16</sub> O	adamantan-1-ol				[768-95-6]
	(320–370)	86.6±2.5	(298)	BG	[78/8]
C <sub>10</sub> H <sub>16</sub> O	adamantan-2-ol				[700-57-2]
	(320–370)	87.9±2.1	(345)	BG	[78/8]
		88.7±2.5	(298)	BG	[78/8]
C <sub>10</sub> H <sub>16</sub> S	1,7,7-trimethylbicyclo[2.2.1]heptan-2-thione				[53402-10-1]
	(262–282)	62.2±0.9	(272)	ME	[99/26]
		61.7±0.9	(298)		[99/26]
C <sub>10</sub> H <sub>16</sub> S <sub>4</sub>	1,3,5,7-tetramethyl-2,4,6,8-tetrathiaadamantane				[7000-79-5]
		117.1±4.1	(298)	TE	[78/3]
C <sub>10</sub> H <sub>17</sub> NOS	carbamothioic acid, N-butyl-N-(2-propynyl), S-ethyl ester				[59300-35-5]
	(298–313)	82.1	(305.5)	ME	[87/4][76/11]
C <sub>10</sub> H <sub>17</sub> NOS	carbamothioic acid, N,N-dipropyl S-(2-propynyl) ester				[59300-36-6]
	(298–313)	92.4	(305.5)	ME	[87/4][76/11]
C <sub>10</sub> H <sub>17</sub> NOS	carbamothioic acid, N-2-methylpropyl-N-(2-propynyl), S-ethyl ester				[59300-34-4]
	(298–313)	74	(305.5)	ME	[87/4][76/11]
C <sub>10</sub> H <sub>18</sub>	bicyclo[3.3.2]decane				[283-50-1]
		58.2±2	(298)		[77/9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{10}\text{H}_{18}$	<i>cis</i> -decahydronaphthalene	64.8	(230)	B	[493-01-6]
		62.5	(298)		[63/6] [63/6][93/16]
$\text{C}_{10}\text{H}_{18}$	<i>trans</i> -decahydronaphthalene	66.2	(241)	B	[493-02-7]
		64.3	(298)		[63/6] [63/6][93/16]
$\text{C}_{10}\text{H}_{18}\text{O}$	$\alpha$ -terpineol (283–328)	80.3	(305)	ME	[10482-56-1] [54/4][60/1]
	<i>(dl)</i> - $\alpha$ -terpineol (287–308)	80.1	(297)		[98-55-5] [87/4]
$\text{C}_{10}\text{H}_{18}\text{O}$	<i>(dl)</i> -borneol (350–475)	69.3	(365)	ME	[6627-72-1] [87/4]
	<i>(dl)</i> -isoborneol (373–457)	41.1	(388)		[124-76-5] [87/4][36/4]
$\text{C}_{10}\text{H}_{18}\text{O}_4$	sebacic acid	$165.3 \pm 2.9$		ME	[111-20-6]
		$160.7 \pm 2.5$	(389)		[99/10][60/4] [60/4][70/1] [87/4]
$\text{C}_{10}\text{H}_{19}\text{N}_5\text{O}$	2-methoxy-4,6-bis(isopropylamino)-1,3,5-triazine (323–365)	92.2	(338)	GS–GC	[1610-18-0] [87/4][64/14]
$\text{C}_{10}\text{H}_{19}\text{N}_5\text{S}$	2-methylthio-4,6-bis(isopropylamino)-1,3,5-triazine (323–393)	100	(338)	GS–GC	[7287-19-6] [87/4][64/14]
$\text{C}_{10}\text{H}_{20}\text{N}_2\text{OS}$	$\text{N},\text{N}$ -diethyl- $\text{N}'$ -isovaleroylthiourea (363)	$121.5 \pm 3.2$	(298)	C	[01/9]
$\text{C}_{10}\text{H}_{20}\text{N}_2\text{OS}$	$\text{N},\text{N}$ -diethyl- $\text{N}'$ -pivaloylthiourea (366)	$114.9 \pm 2.7$	(298)	C	[01/9] [106-22-9]
$\text{C}_{10}\text{H}_{20}\text{O}$	citronellol (283–333)	66.1	(308)		[54/4][60/1] [1502-05-2]
$\text{C}_{10}\text{H}_{20}\text{O}$	cyclodecanol (287–292)	$100.5 \pm 0.5$	(288)	TM	[55/5]
$\text{C}_{10}\text{H}_{20}\text{O}$	<i>(dl)</i> -menthol (279–299)	$78.6 \pm 4$	(289)	HSA	[89-78-1] [81/8]
$\text{C}_{10}\text{H}_{20}\text{O}$	<i>(l)</i> -menthol (279–299)	$95.8 \pm 4.8$	(289)	HSA	[2216-51-5] [81/8]
$\text{C}_{10}\text{H}_{20}\text{O}_2$	decanoic acid (293–303)	$118.8 \pm 2.2$	(298)	ME	[334-48-5] [68/2][70/1] [87/4]
		$117.1 \pm 1.7$	(295)	ME	[61/1] [14156-10-6]
$\text{C}_{10}\text{H}_{20}\text{O}_3$	peroxydecanoic acid (293–303)	$117.1 \pm 0.8$	(298)	ME	[80/23] [2319-29-1]
$\text{C}_{10}\text{H}_{21}\text{NO}$	decanamide (353–370)	$125.9 \pm 1.3$	(361.5)	ME	[59/3] [124-18-5]
$\text{C}_{10}\text{H}_{22}$	decane	80.3	(298)	B	[80/23]
		84.8	(243)	B	[63/6]
		82.4	(298)		[63/6][93/16]
$\text{C}_{10}\text{H}_{22}\text{O}$	decanol (264–273)	$115.5 \pm 6.3$	(268)	ME	[112-30-1] [65/5][87/4]
		$112.5 \pm 6.3$	(298)		[65/5]
$\text{C}_{10}\text{H}_{22}\text{O}_2$	1,10-decanediol	$155.8 \pm 0.9$	(298)	C	[112-47-0] [90/14]
$\text{C}_{10}\text{H}_{24}\text{N}_4$	1,4,8,11-tetraazacyclotetradecane (352–372)	$133.9 \pm 2.5$	(362)	TE	[295-37-4] [83/4]
$\text{C}_{11}\text{H}_6\text{N}_4$	bicyclo[2.2.1]hept-5-ene-2,2,3,3-tetracarbonitrile	$117.2 \pm 5.4$	(408)	MG	[6343-21-1] [72/13][77/1]
$\text{C}_{11}\text{H}_7\text{N}_2$	2,2-dicyano-3-phenylpropionitrile (318–388)	$96.2 \pm 0.4$	(353)	T	[6023-46-7] [94/44]
$\text{C}_{11}\text{H}_8\text{N}_4$	3-methyl-1,1,2,2-tetracyanocyclohex-4-ene	$82 \pm 2.1$	(350)	MG	[13358-02-6] [71/14][77/1]
$\text{C}_{11}\text{H}_8\text{O}_2$	1-naphthoic acid	$117.6 \pm 0.4$		DSC	[86-55-5]
		$110.4 \pm 0.2$	(355)		[83/8] [74/2][77/1] [87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>11</sub> H <sub>8</sub> O <sub>2</sub>	2-naphthoic acid	113.6	(298)	C	[74/28] [93-09-4]
	(347–363)	119.5±0.6 113.6±0.8		DSC ME	[83/8] [74/2][77/1] [87/4]
		117.2	(298)	C	[74/28]
C <sub>11</sub> H <sub>9</sub> N	4-phenylpyridine	81.4±1.6	(298)	BE	[939-23-1] [00/7]
C <sub>11</sub> H <sub>9</sub> NO <sub>2</sub>	1-(4-methylphenyl)-1 <i>H</i> -pyrrole-2,5-dione	104.6±0.8		C	[1631-28-3] [98/25]
C <sub>11</sub> H <sub>9</sub> NO <sub>3</sub>	1-(4-methoxyphenyl)-1 <i>H</i> -pyrrole-2,5-dione	121.1±0.8		C	[1081-17-0] [98/25]
C <sub>11</sub> H <sub>10</sub>	2-methylnaphthalene	65.7±0.85 61.7±1.7		C	[91-57-6] [74/10] [68/1][77/1]
C <sub>11</sub> H <sub>10</sub> N <sub>2</sub> O <sub>3</sub>	2-methyl-3-acetylquinoxaline-1,4-dioxide	117.0±2.4	(298)	ME	[13297-17-1] [97/25]
C <sub>11</sub> H <sub>10</sub> N <sub>2</sub> O <sub>3</sub>	2-methyl-3-carboxymethoxyquinoxaline-1,4-dioxide	118.3±2.6	(298)	C	[40016-70-4] [97/25]
C <sub>11</sub> H <sub>10</sub> O <sub>2</sub>	pentacyclo[5.4.0 <sup>2,6</sup> 0 <sup>3,10</sup> 0 <sup>5,9</sup> ]undecane-8,11-dione	92.6±1.0	(298)	ME	[2985-72-7] [99/4]
C <sub>11</sub> H <sub>11</sub> N	2,6-dimethylquinoline	84.5±1.5	(298)	C	[877-43-0] [95/27]
C <sub>11</sub> H <sub>11</sub> N	2,7-dimethylquinoline	87.5±1.5	(298)	C	[93-37-8] [95/27]
C <sub>11</sub> H <sub>11</sub> N <sub>3</sub> O	3,5-dimethyl-1-phenyl-4-nitrosopyrazole	100.4±2.2	(298)	C	[5809-38-1] [01/4]
C <sub>11</sub> H <sub>12</sub> N <sub>2</sub> O <sub>3</sub>	4-[(4-nitrophenyl)amino]pent-3-ene-2-one	121.9±3.9	(298)	C	[20771-72-6] [93/24]
C <sub>11</sub> H <sub>12</sub> O <sub>2</sub>	1-phenyl-4,7-dioxaspiro[2.4]heptane	91.8±0.8	(298)		[39522-76-4] [98/26]
C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>trans</i> -2,3-dimethoxycinnamic acid				[7345-82-6]
	(380–392)	136.6±0.9	(386)	ME	[99/27]
	(380–392)	141.0±0.9	(298)	ME	[99/27]
C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>trans</i> -2,4-dimethoxycinnamic acid				[16909-09-4]
	(391–404)	144.2±1.3	(398)	ME	[99/27]
	(391–404)	149.2±1.3	(298)	ME	[99/27]
C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>trans</i> -2,5-dimethoxycinnamic acid				[10538-51-9]
	(376–391)	134.5±1.1	(384)	ME	[99/27]
	(376–391)	138.8±1.1	(298)	ME	[99/27]
C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>trans</i> -3,4-dimethoxycinnamic acid				[2316-26-9]
	(390–404)	144.9±0.8	(397)	ME	[99/27]
	(390–404)	149.9±0.8	(298)	ME	[99/27]
C <sub>11</sub> H <sub>12</sub> O <sub>4</sub>	<i>trans</i> -3,5-dimethoxycinnamic acid				[16909-11-8]
	(385–397)	136.7±0.5	(391)	ME	[99/27]
	(385–397)	141.4±0.5	(298)	ME	[99/27]
C <sub>11</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	L-tryptophane				[73-22-3]
	(340–440)	87.9±8 U	(390)	LE	[77/2]
C <sub>11</sub> H <sub>13</sub> NO	(E)-3-(methylamino)-1-phenyl-but-2-en-1-one	99.2±4.2	(298)	C	[14091-93-1] [93/24]
C <sub>11</sub> H <sub>13</sub> NO	4-phenylaminopent-3-ene-2-one	89.9±3.8	(298)	C	[7294-89-5] [93/24]
C <sub>11</sub> H <sub>14</sub>	pentacyclo[5.4.0 <sup>2,6</sup> 0 <sup>3,10</sup> 0 <sup>5,9</sup> ]undecane				[4421-32-3]
	(273–323)	54.7±0.9 54.9±1.1	(337) (298)	C ME	[95/10] [95/10]
C <sub>11</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub>	4-nitrobenzylidene <i>tert</i> -butylamine	91.1±3.1	(298)	C	[718-36-5] [89/15]
C <sub>11</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub>	2-cyano-2-nitroadamantane	70.0±1.9	(338)	T	[128478-71-7] [90/10]
C <sub>11</sub> H <sub>14</sub> N <sub>2</sub> O <sub>3</sub>	4-nitrobenzylidene <i>tert</i> -butylamine N-oxide	116.5±3.1	(298)	C	[3585-88-4] [89/15]
C <sub>11</sub> H <sub>14</sub> O	5-phenylvaleric acid	118.5±0.8	(321)	ME	[2270-20-4] [01/10]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{11}\text{H}_{14}\text{O}_2$	2- <i>tert</i> -butylbenzoic acid (306–322)	119.4±1.1 99.8±0.4	(298) (315)	ME ME	[01/10] [1077-58-3]
$\text{C}_{11}\text{H}_{14}\text{O}_2$	3- <i>tert</i> -butylbenzoic acid (318–335)	103±0.5	(327)	ME	[79/4] [7498-54-6]
$\text{C}_{11}\text{H}_{14}\text{O}_2$	4- <i>tert</i> -butylbenzoic acid (325–343)	103.8±0.4	(334)	ME	[79/4] [98-73-7]
$\text{C}_{11}\text{H}_{14}\text{O}_2$	2,3,4,5-tetramethylbenzoic acid (337–360)	113.4±0.6 115.9±0.6	(348) (298)	ME	[88/10] [88/10]
$\text{C}_{11}\text{H}_{14}\text{O}_2$	2,3,4,6-tetramethylbenzoic acid (330–351)	106.9±0.5 109.7±0.5	(341) (298)	ME	[2408-38-0] [88/10] [88/10]
$\text{C}_{11}\text{H}_{14}\text{O}_2$	2,3,5,6-tetramethylbenzoic acid (330–351)	104.6±0.8 106.1±0.8	(341) (298)	ME	[2604-45-7] [88/10] [88/10]
$\text{C}_{11}\text{H}_{14}\text{O}_2$	3,5-diethylbenzoic acid (325–343)	104.1±4.2	(334)		[3854-90-8] [74/15][77/1] [87/4]
$\text{C}_{11}\text{H}_{14}\text{O}_2\text{S}$	<i>p</i> -tolyl but-1-enyl sulfone	106.3±2.5		B	[111895-49-9]
$\text{C}_{11}\text{H}_{14}\text{O}_2\text{S}$	<i>p</i> -tolyl but-2-enyl sulfone	107.5±2.5		B	[69/11][70/1] [24931-66-6]
$\text{C}_{11}\text{H}_{14}\text{O}_2\text{S}$	<i>p</i> -tolyl but-3-enyl sulfone	113.4±2.9		B	[69/13][70/1] [17482-19-8]
$\text{C}_{11}\text{H}_{14}\text{O}_2\text{S}$	<i>p</i> -tolyl-isobutenyl sulfone	102.1±2.5		B	[16192-03-3]
$\text{C}_{11}\text{H}_{14}\text{O}_2\text{S}$	<i>p</i> -tolyl 2-methylprop-2-enyl sulfone	106.7±2.9		B	[16192-04-4] [69/13][70/1]
$\text{C}_{11}\text{H}_{15}\text{N}$	1-adamantyl-1-carbonitrile (294–312)	67.1±0.8 67.2±0.8	(303) (298)	ME	[92/26] [92/26]
$\text{C}_{11}\text{H}_{15}\text{NO}$	benzylidene <i>tert</i> -butylamine N-oxide	86.8±0.9	(298)	C	[3376-24-7] [89/15]
$\text{C}_{11}\text{H}_{15}\text{NS}$	N,N-diethylthiobenzamide	91.4±3.2	(298)	C	[18775-06-9] [89/11]
$\text{C}_{11}\text{H}_{16}$	pentamethylbenzene	71.6±0.1 77.4±0.4	(298) (298)	C ME	[700-12-9] [94/13] [89/18]
$\text{C}_{11}\text{H}_{16}\text{N}_2\text{O}_2$	1,3-dimethyl-5,6-pentamethylneuracil (335–358)	111.9±0.2	(346)	ME	[82413-41-0] [83/14]
	(323–338)	108.8±5	(330)	QR	[80/19][83/14]
	(340–370)	113.4±1.3	(355)	MS	[80/19][83/14]
$\text{C}_{11}\text{H}_{16}\text{O}$	2- <i>tert</i> -butyl-4-methylphenol (288–318)	82.6±0.5 82.9±0.5	(303) (298)	GS	[2409-55-4] [99/13] [99/13]
	(274–294)	77.4	(284)		[87/4][60/14]
$\text{C}_{11}\text{H}_{16}\text{O}$	2- <i>tert</i> -butyl-5-methylphenol (277–294)	80.4±1.3 79.7±1.3	(287) (298)	GS	[88-60-8] [99/13] [99/13]
$\text{C}_{11}\text{H}_{16}\text{O}$	4- <i>tert</i> -amylphenol (293–333)	87.4±0.5 88.3±0.5	(313) (298)	GS	[80-46-6] [99/13] [99/13]
$\text{C}_{11}\text{H}_{16}\text{O}$	1-(2,4,6-trimethylphenyl)ethanol (282–313)	U 5.7	(297)		[31108-34-6] [87/4]
$\text{C}_{11}\text{H}_{17}\text{NO}$	1-adamantyl carboxamide (336–354)	105.9±0.5 108.0±0.5	(345) (298)	ME	[5511-18-2] [89/6] [89/6]
$\text{C}_{11}\text{H}_{17}\text{N}_5$	6,9-dimethyl-8-butyladenine (348–354)	106.0±0.1	(351)	ME	[153495-36-4] [94/6]
$\text{C}_{11}\text{H}_{18}$	1-methyladamantane (300–342)	67.8±1.3	(298)	BG	[768-91-2] [77/11]
	(306–336)	67.6±0.5	(321)		[75/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}$ /kJ mol <sup>-1</sup>	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>11</sub> H <sub>18</sub>	2-methyladamantane (310–330)	67.5±2.1	(320)		[700-56-1] [75/2]
	(300–340)	68.2±1.3	(298)		[77/11]
C <sub>11</sub> H <sub>20</sub>	bicyclo[3.3.3]undecane	63.6±0.8	(298)	C	[180-43-8] [75/7][77/1]
C <sub>11</sub> H <sub>20</sub> O <sub>4</sub>	undecanedioic acid (371–381)	158.6±1.9 162.5±1.9	(376) (298)	ME	[1852-04-6] [99/10] [99/10]
C <sub>11</sub> H <sub>22</sub> O <sub>2</sub>	undecanoic acid (303–308)	121.3±1.3	(298)	ME	[112-37-8] [68/2][70/1]
C <sub>11</sub> H <sub>22</sub> O <sub>3</sub>	peroxyundecanoic acid (293–303)	125.9±3.4	(298)	ME	[676-08-4] [80/23]
C <sub>11</sub> H <sub>23</sub> NO	N-methyl decanamide (303–325)	102.8±0.8	(314)	GS	[59/4][87/4]
C <sub>11</sub> H <sub>24</sub>	undecane	91.5	(236)	B	[1120-21-4] [63/6]
C <sub>12</sub> Cl <sub>8</sub> O	octachlorodibenzofuran (373–474)	149.4	(423)	T	[39001-02-2] [89/20][86/7]
C <sub>12</sub> Cl <sub>8</sub> O <sub>2</sub>	octachlorodibenzo[b,e][1,4]dioxin (393–573)	149.8	(483)	T	[3268-87-9] [89/20][86/7]
C <sub>12</sub> F <sub>10</sub>	decafluorobiphenyl (298–323)	85.3±2.3	(310)	ME	[434-90-2] [74/9][87/4]
C <sub>12</sub> F <sub>18</sub>	hexakis(trifluoromethyl)tetracyclo[2.2.0.0 <sup>2,6</sup> .0 <sup>2,5</sup> ]hexane (293–306)	49.2	(299.5)	I	[22736-20-5] [87/4][70/24]
C <sub>12</sub> Cl <sub>10</sub>	decachlorobiphenyl (324–363)	121.8	(343)	GS	[2051-24-3] [84/26]
C <sub>12</sub> H <sub>2</sub> Cl <sub>8</sub>	2,2',3,3',5,5',6,6'-octachlorobiphenyl (302–334)	101.7	(318)	GS	[2136-99-4] [84/26]
C <sub>12</sub> H <sub>4</sub> Cl <sub>4</sub> O	1,2,3,4-tetrachlorodibenzofuran (333–393)	118.5	(363)	T	[24478-72-6] [89/20][86/7]
C <sub>12</sub> H <sub>4</sub> Cl <sub>4</sub> O	2,3,7,8-tetrachlorodibenzofuran (303–344)	124.0	(323)	T	[51207-31-9] [89/20][86/7]
C <sub>12</sub> H <sub>4</sub> Cl <sub>4</sub> O <sub>2</sub>	2,3,7,8-tetrachlorodibenzo[b,e][1,4]dioxin (263–303)	124.0	(578)		[1746-01-6] [85/19]
C <sub>12</sub> H <sub>4</sub> Cl <sub>6</sub>	2,2',4,4',6,6'-hexachlorobiphenyl (452–553)	103.4±2.3	(283)	GS	[33976-03-2] [94/1]
C <sub>12</sub> H <sub>4</sub> N <sub>4</sub>	7,7,8,8-tetracyanoquinodimethane (382–464)	79.0 108±2 122±2 126.1±1	(500) (423) (413)	TGA T ME	[1518-16-7] [95/35] [84/23] [84/23] [80/22]
	(433–499)	104.8±9.2	(465)	ME,TE MG	[63/4][70/1] [80/23][87/4]
C <sub>12</sub> H <sub>5</sub> Cl <sub>3</sub> O <sub>2</sub>	1,3,7-trichlorodibenzo[b,e][1,4]dioxin (310–373)	116.2	(342)	T	[67028-17-5] [89/20][86/7]
C <sub>12</sub> H <sub>5</sub> Cl <sub>3</sub> O <sub>2</sub>	1,2,4-trichlorodibenzo[b,e][1,4]dioxin (310–374)	118.8	(342)	T	[39227-58-2] [89/20][86/7]
C <sub>12</sub> H <sub>5</sub> Cl <sub>5</sub>	2,2',4,5,5'-pentachlorobiphenyl (303–313)	92.7	(308)	GS	[37680-73-2] [81/19]
C <sub>12</sub> H <sub>6</sub> Cl <sub>2</sub> O	3,6-dichlorodibenzofuran (305–374)	110.9	(340)	T	[74919-40-4] [89/20][86/7]
C <sub>12</sub> H <sub>6</sub> Cl <sub>2</sub> O <sub>2</sub>	2,3-dichlorodibenzo[b,e][1,4]dioxin (306–374)	108.6±1.0 107.2±0.8 108.6±1.0 106.2	(298) (358) (298) (340)	C C C T	[29446-15-9] [99/38] [98/10] [98/10] [89/20][86/7]
C <sub>12</sub> H <sub>6</sub> Cl <sub>2</sub> O <sub>2</sub>	2,7-dichlorodibenzo[b,e][1,4]dioxin (314–374)	105.5	(344)	T	[33857-26-0] [89/20][86/7]
C <sub>12</sub> H <sub>6</sub> Cl <sub>2</sub> O <sub>2</sub>	2,8-dichlorodibenzo[b,e][1,4]dioxin (305–363)	109.0	(334)	T	[38964-22-6] [89/20][86/7]
C <sub>12</sub> H <sub>6</sub> Cl <sub>4</sub>	2,2',5,5'-tetrachlorobiphenyl (303–312)	94.6	(308)	GS	[35693-99-3] [81/19]
C <sub>12</sub> H <sub>6</sub> Cl <sub>4</sub>	2,3,4,5-tetrachlorobiphenyl				[33284-53-6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{12}\text{H}_7\text{ClO}_2$	(253–393)	88.7±1.2	(273)	GS	[94/1]
	1-chlorodibenzo[b,e][1,4]dioxin	95.2±1.1	(298)	C	[39227-53-7]
		95.2			[99/38]
$\text{C}_{12}\text{H}_7\text{ClO}_2$	(303–338)	98.6	(321)	T	[98/27]
	2-chlorodibenzo[b,e][1,4]dioxin	97.2	(298)	C	[89/20][86/7]
		97.2±0.6	(298)	C	[39227-54-8]
$\text{C}_{12}\text{H}_8$	(305–348)	97.2	(327)	T	[96/13]
	acenaphthylene	70.0	(298)	CGC–DSC	[89/20][86/7]
		77.2	(383)	GS	[208/96-8]
	(238–323)	73.2±0.5	(303)	GS	[72/1]
		73.0±0.4	(298)	C	[83/11]
$\text{C}_{12}\text{H}_8$	(286–318)	71.1±1.3			[70/1][87/4]
	biphenylene				[65/3]
	(313–453)	82.7	(383)	GS	[98/5]
	(309–336)	U 104.5	(319)		[95/7]
		87.3±0.3	(298)	B	[89/9]
		83.8±.3		C	[80/27]
$\text{C}_{12}\text{H}_8\text{Cl}_2$	(371–381)	U 128.9±2	(376)		[72/1]
	2,2'-dichlorobiphenyl				[55/1][70/1]
$\text{C}_{12}\text{H}_8\text{Cl}_2$	(310–328)	96.1	(314)	ME	[87/4]
	(310–328)	96.2±4.2	(298)	ME	[64/8]
$\text{C}_{12}\text{H}_8\text{Cl}_2$	4,4'-dichlorobiphenyl				[64/8][70/1]
	(263–303)	95.3±1.3	(283)	GS	[64/8][87/4]
	(303–360)	103.7	(331)	ME	[94/1]
	(303–360)	103.8±4.2	(298)	ME	[64/8][70/1]
$\text{C}_{12}\text{H}_8\text{Cl}_6$	1,2,3,4,10,10-hexachloro-1,4,4a,5,8,8a-hexahydro- <i>endo-exo</i> -1,4:5,8-dimethylnaphthalene (aldrin)				[2050-68-2]
	(309–343)	91.8	(326)	GS	[309-00-2]
$\text{C}_{12}\text{H}_8\text{Cl}_6\text{O}$	1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4- <i>endo-exo</i> -5,8-dimethanonaphthalene (dieldrin)				[82/23]
	(308–348)	93.8	(328)	GS	[60-57-1]
	(293–313)	98.7	(303)	GS	[64/8]
$\text{C}_{12}\text{H}_8\text{F}_2$	2,2'-difluorobiphenyl				[87/4][64/8]
	(301–319)	95.1	(310)	ME	[388-82-9]
	(301–318)	95±4.2	(298)	ME	[64/8][70/1]
$\text{C}_{12}\text{H}_8\text{F}_2$	4,4'-difluorobiphenyl				[2050-68-2]
	(294–318)	91.4	(306)	ME	[64/8]
	(294–318)	91.2±4.2	(298)	ME	[64/8][70/1]
$\text{C}_{12}\text{H}_8\text{N}_2$	1,10-phenanthroline				[66-71-7]
		98.3		ME	[72/10]
$\text{C}_{12}\text{H}_8\text{N}_2$	phenazine				[92-82-0]
		92.7±0.4	(354)		[91/4]
		97.0±0.4	(298)		[91/4]
		91.8±2.1	(298)	C	[80/6]
	(280–318)	92.4	(295)		[90/9]
		99.9±2.5		ME, GS	[87/4]
	(303–328)	90.4±2.5	(298)	TE	[75/5]
	(303–323)	90.0±1.5	(298)	TCM	[U/1][75/5]
	(281–293)	90.4±1.7		LE	[75/1]
$\text{C}_{12}\text{H}_8\text{N}_2$		U 81.5			[46/1]
	benzo[c]cinnoline				[230-17-1]
	(320–360)	101.7±.2	(340)	ME	[77/14][87/4]
$\text{C}_{12}\text{H}_8\text{N}_2\text{O}$		113		ME	[72/10]
	phenazine-N-oxide				[304-81-4]
$\text{C}_{12}\text{H}_8\text{N}_2\text{O}_4$	4,4'-dinitrobiphenyl				[90/9]
	(441–428)	104.6±1.8	(420)	ME	[1528-74-1]
					[53/10][60/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
C <sub>12</sub> H <sub>8</sub> N <sub>4</sub>	bicyclo[2.2.2]oct-5-ene-2,2,3,3-tetracarbonitrile	111.7±5.4	(433)		[1017-93-2] [72/13][77/1]
C <sub>12</sub> H <sub>8</sub> N <sub>4</sub>	dibenzo-1,3a,4,6a-tetraazapentalene (363–433)	70.3±1.7	(400)		[67/6]
C <sub>12</sub> H <sub>8</sub> N <sub>4</sub>	dibenzo-1,3a,6,6a-tetraazapentalene (363–443)	42.3±3.4	(403)		[67/6]
C <sub>12</sub> H <sub>8</sub> O	dibenzofuran	84.4±0.7	(298)		[132-64-9] [90/6]
		76.5±0.2	(298)		[87/10]
	(304–343)	85.6	(324)	T	[89/20][86/7]
	(303–343)	79.1	(323)	GS	[86/8]
		88.7±2.1			[58/2]
C <sub>12</sub> H <sub>8</sub> O <sub>2</sub>	dibenzo[b,e][1,4]dioxin	89.6±0.7	(298)	C	[262-12-4] [99/38]
		89.6±0.7	(318)	C	[97/37]
	(303–333)	92.3	(318)	T	[89/20][86/7] [132-65-0]
C <sub>12</sub> H <sub>8</sub> S	dibenzothiophene	85.1±0.4	(298)	C	[87/10][79/2]
	(303–348)	91.2	(325)	GS	[86/8]
	(336–366)	90.7			[81/14]
C <sub>12</sub> H <sub>8</sub> S <sub>2</sub>	thianthrene	103.6±0.4	(350)	IPM	[93/1]
	(338–368)	98.6±0.5	(353)		[89/4]
		99.4±0.6	(298)		[89/4]
	(358–426)	98.0	(393)	GS	[81/14]
	(338–368)	97.5±6.3	(353)	HSA	[79/7]
C <sub>12</sub> H <sub>9</sub> Cl	4-chlorobiphenyl	86.0±0.9	(278)	GS	[2051-62-9]
	(253–303)	73.7±0.7	(326)	TE,ME	[83/25]
C <sub>12</sub> H <sub>9</sub> N	carbazole	101.2±1.1	(355)	ME	[86-74-8] [90/8]
	(346–364)	103.3±1.1	(298)	ME	[90/8]
		97.7±0.3	(298)	C	[87/10]
		84.5±.8			[55/2][70/1]
C <sub>12</sub> H <sub>9</sub> NS	phenothiazine	86	(351)		[92-84-2] [87/4][42/1]
C <sub>12</sub> H <sub>9</sub> N <sub>3</sub> O <sub>2</sub>	4-nitroazobenzene	110.0		GS	[2491-52-3] [87/19][91/18]
C <sub>12</sub> H <sub>9</sub> N <sub>3</sub> O <sub>3</sub>	4-hydroxy-4'-nitroazobenzene	140.1		GS	[1435-60-5] [87/19][91/18]
	(417–444)	143.8±1.3	(430.5)	TE	[87/4][70/4]
		144±2.5		TE,ME	[70/4]
		136.8			[68/10][88/24]
C <sub>12</sub> H <sub>9</sub> N <sub>3</sub> O <sub>4</sub>	N-(2,4-dinitrophenyl)-N-phenylamine	147.6±1.7	(411)	TE	[961-68-2] [87/4][70/4]
	(402–420)	149±3.0		TE,ME	[70/4]
		131.8			[68/10][88/24]
C <sub>12</sub> H <sub>9</sub> N <sub>3</sub> O <sub>5</sub>	N-(2,4-dinitrophenyl)-N-(4-hydroxyphenyl)amine	155.6±4.2	(455)	TE,ME	[119-15-3] [70/4][87/4]
	(440–470)	154.0			[68/10][88/24]
C <sub>12</sub> H <sub>9</sub> N <sub>4</sub> O <sub>4</sub>	N-(4-aminophenyl)-N-(2,4-dinitrophenyl)amine	156.5±2.1	(448.5)	TE	[961-68-2] [87/4][70/4]
	(437–460)	154±2.9		TE,ME	[70/4]
		139.3			[68/10][88/24]
C <sub>12</sub> H <sub>10</sub>	acenaphthene	84.6	(298)	CGC–DSC	[83-32-9] [98/5]
	(313–453)	83.2	(383)	GS	[95/7]
	(283–323)	86.8±0.9	(303)	GS	[83/11]
		83.4±1.0	(298)		[75/8][77/7]
		82.4	(366)	B,IPM	[75/8]
	(327–356)	84.7±2.7	(341)	ME	[74/9]
	(290–340)	86.2±0.8		ME	[65/3][70/1]
	(291–310)	82.1±0.4	(300)	V	[59/2][87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{12}\text{H}_{10}$	(258–308) biphenyl	81.6 82.9 81.8 83.4 U 113.3 $81.5 \pm 0.2$ $77.9 \pm 0.3$ $81.8 \pm 0.2$ 80.4±1.6 $76.0 \pm 4.0$ $83.6 \pm 2.5$ 75.2 $81.8 \pm 0.4$ $75.8 \pm 0.6$ $81.6 \pm 2$	(298) (383) (311) (318) (298) (298) (319) (310) (298) (289) (292)	CGC–DSC GS EM C C TSGC HSA ME ME C	[58/1] [92-52-4] [98/5] [95/7] [89/1] [89/9] [89/5] [79/3] [78/34] [75/2] [75/3] [74/9] [74/6] [72/1] [55/3] [53/1][70/1] [60/1] [53/10] [53/13] [51/1] [38/1]
	(313–453)	81.6			
	(283–338)	83.4			
	(303–333)	U 113.3			
		$81.5 \pm 0.2$			
		$77.9 \pm 0.3$			
		$81.8 \pm 0.2$			
	(306–332)	80.4±1.6			
	(273–313)	$76.0 \pm 4.0$			
	(298–323)	$83.6 \pm 2.5$			
	(298–318)	75.2			
		$81.8 \pm 0.4$			
	(279–299)	$75.8 \pm 0.6$			
		$81.6 \pm 2$			
$\text{C}_{12}\text{H}_{10}\text{N}_2$	(287–307)	$75.1 \pm 1.7$	(297)		[53/10]
	(288–314)	$81.6 \pm 1.7$	(301)		[53/13]
	(278–307)	$72.8 \pm 3$	(302)	ME	[51/1]
		$68.6 \pm 0.8$	(292)	QF	[38/1]
$\text{C}_{12}\text{H}_{10}\text{N}_2$	<i>cis</i> -azobenzene				[1080-16-6]
	(273–323)	92.9	(288)		[87/4]
	(298–357)	$92.9 \pm 1.2$	(328)	ME	[77/14]
	(303–333)	U 74.9	(318)	ME	[50/3][60/1]
	<i>trans</i> -azobenzene				[17082-12-1]
	(298–302)	$94.1 \pm 0.8$	(298)	B	[96/11]
	(298–341)	$93.6 \pm 1.9$	(298)	ME	[92/4]
	(299–317)	$92.1 \pm 0.9$	(319)	TE,ME	[84/18]
	(299–317)	$96.9 \pm 0.8$	(308)	TE	[77/4]
	(298–347)	$94.9 \pm 0.8$	(308)	ME	[77/4]
$\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}$	(298–347)	$93.8 \pm 1.2$	(323)	ME	[77/14]
	(303–333)	U74.9	(318)		[50/3][60/1]
$\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}$	<i>trans</i> -diphenyldiazene-N-oxide	$94.1 \pm 0.8$	(298)	B	[96/11]
		$98.6 \pm 0.9$	(298)	C	[86/10]
$\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$	N-(2-nitrophenyl)-N-phenylamine				[119-75-5]
	(335–346)	$100.9 \pm 2.1$	(340.5)	TE	[87/4][70/4]
		$101.9 \pm 1.7$		TE,ME	[70/4]
$\text{C}_{12}\text{H}_{10}\text{N}_2\text{O}_2$		108.4			[68/10][88/24]
	N-(4-nitrophenyl)-N-phenylamine				[836-30-6]
	(382–403)	$130.6 \pm 1.3$	(392.5)	TE	[87/4][70/4]
		$126.2 \pm 1.6$		TE,ME	[70/4]
$\text{C}_{12}\text{H}_{10}\text{N}_4$		120.9			[68/10][88/24]
	4,5-dimethyl-1,1,2,2-tetracyanocyclohex-4-ene	$107.9 \pm 4.2$	(378)		[69155-29-9]
$\text{C}_{12}\text{H}_{10}\text{N}_4\text{O}_2$	4-amino-4'-nitroazobenzene				[72/13][77/1]
	(403–465)	123	(434)	GS	[730-40-5]
		140.1		GS	[89/29]
		127.6		UV	[87/19][91/18]
		136.4		ME	[84/39][84/40]
		$140.2 \pm 1.2$		TE,ME	[80/25][91/18]
		134.3		ME	[70/4]
	(404–424)	$137.7 \pm 0.8$	(414)	TE	[68/10][88/24]
					[67/7][87/4]
					[70/4]
$\text{C}_{12}\text{H}_{10}\text{O}$	(404–423)	$136.4 \pm 5.0$	(413)	ME	[67/7][66/18]
	2-acetylaphthalene				[93-08-3]
$\text{C}_{12}\text{H}_{10}\text{O}$	(295–316)	$87.9 \pm 0.4$	(305)	V	[59/2][87/4]
	diphenyl ether				[101-84-8]
$\text{C}_{12}\text{H}_{10}\text{O}$		82±2.1		E	[58/2][70/1]
	2-phenylphenol				[90-43-7]
	(301–328)	$87.6 \pm 0.9$	(314)	T	[98/9]
		$88.5 \pm 0.9$	(298)		[98/9]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)		CAS registry number
Polymorph	Temperature range (K)			Method	Reference
C <sub>12</sub> H <sub>10</sub> O	(292–314)	82.9	(303)		[87/4][60/14]
	4-phenylphenol	106.6±1.0	(351)	T	[92-69-3]
	(333–368)	109.8±1.0	(298)		[98/9]
C <sub>12</sub> H <sub>10</sub> O <sub>2</sub>	(327–348)	97.0	(337.5)		[98/9]
	2,2'-dihydroxybiphenyl	111.4±1.2	(349)	T	[87/4][60/14]
	(334–363)	114.4±1.2	(298)		[1806-29-7]
C <sub>12</sub> H <sub>10</sub> O <sub>2</sub>	4,4'-dihydroxybiphenyl	138.6±2.0	(371)	T	[92-88-6]
	(354–388)	143.0±2.0	(298)		[98/9]
	diphenyl sulfone	106.3±2.9			[127-63-9]
C <sub>12</sub> H <sub>10</sub> O <sub>4</sub>	quinhydrone (quinone–hydroquinone)				[U/3][70/1]
	(317–334)	89.1	(325.5)		[106-34-3]
	(300–325)	88.6±1	(313)	ME,TE	[87/4]
C <sub>12</sub> H <sub>10</sub> S <sub>2</sub>	U 181.2				[81/4]
	NA				[53/10][60/1]
	diphenyldisulfide				[51/6]
C <sub>12</sub> H <sub>10</sub> S <sub>2</sub> O <sub>4</sub>	95.±3.0			E	[882-33-7]
	diphenyldisulfone	91.7		E	[62/5][70/1]
	diphenylamine	96.7±2.5		TE,ME	[10409-06-0]
C <sub>12</sub> H <sub>11</sub> N	99.2				[64/5]
	(298–323)	96.7±2.5	(310)	QF	[122-39-4]
	N-acetyl-1-naphthylamine	94.1	(348.5)		[70/4]
C <sub>12</sub> H <sub>11</sub> NO	(337–360)				[68/10][88/24]
	4-aminoazobenzene	106.3		GS	[53/5][70/1]
	(356–373)	109.4			[575-36-0]
C <sub>12</sub> H <sub>12</sub>	1,8-dimethylnaphthalene	110.9±1.7	(364)	ME	[87/4][60/21]
	(328–336)	77.9	(332)	IPM	[60-09-3]
		79.6	(336)	B,IPM	[84/40]
C <sub>12</sub> H <sub>12</sub>		82.7±0.3	(298)	C	[56/2][87/4]
	2,3-dimethylnaphthalene				[569-4-5]
	(333–373)	82.8	(348)	IPM	[581-40-8]
C <sub>12</sub> H <sub>12</sub>	(287–300)	82.2±0.4	(294)	ME	[87/4][75/8]
		81.0		B,IPM	[79/5]
	(278–301)	79.9±0.4	(290)	V	[75/8][79/5]
C <sub>12</sub> H <sub>12</sub>	2,6-dimethylnaphthalene	84.4±1.9	(366)	IPM	[59/2][87/4]
	(350–383)				[581-42-0]
		82.5	(383)	B,IPM	[77/7][75/8]
C <sub>12</sub> H <sub>12</sub>	(279–304)	84.1	(291)	V	[87/4]
	2,7-dimethylnaphthalene				[59/2][87/4]
	(333–369)	83.8±1	(345)	IPM	[582-16-1]
C <sub>12</sub> H <sub>12</sub> N <sub>2</sub>		83.2	(369)	B,IPM	[77/7][75/8]
	(333–368)	84.6	(348)	IPM	[75/8][87/4]
	4,4'-dimethyl-2,2'-bipyridyl				[1134-35-6]
C <sub>12</sub> H <sub>12</sub> N <sub>2</sub> O	99.7±2.3			C	[97/27]
	4,4'-diaminodiphenyl oxide	62.8			[101-80-4]
					[75/11]
C <sub>12</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	1-(4-dimethylaminophenyl)-1 <i>H</i> -pyrrole-2,5-dione				[6953-81-7]
	(350–370)	122.6±0.9		C	[98/25]
C <sub>12</sub> H <sub>12</sub> O <sub>6</sub>	1,3,5-trimethoxycarbonylbenzene				[2672-58-4]
	(350–368)	115.9±0.4	(359)	ME	[95/6]
		118.9±0.4	(298)		[95/6]
C <sub>12</sub> H <sub>14</sub> O <sub>2</sub>		117.5±0.8	(298)		[67/8][95/6]
	ethyl <i>trans</i> -2-phenylcyclopropanecarboxylate	96.9±0.4	(298)	C	[946-39-4]
	1,1-diacetoxy-1-phenylethane				[98/24]
C <sub>12</sub> H <sub>14</sub> O <sub>4</sub>					[28153-24-4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)		CAS registry number
Polymorph	Temperature range (K)			Method	Reference
$\text{C}_{12}\text{H}_{15}\text{N}_3\text{O}_2$	(308–338)	94.4±2.2	(318)	GS	[96/14]
	3,6-bis(dimethylamino)phthalimide				[5972-07-6]
	(400–457)	105	(415)		[87/4]
$\text{C}_{12}\text{H}_{15}\text{N}_3\text{O}_6$		135.3		RG	[58/4]
	2,4,6-trinitro-1,3-dimethyl-5- <i>tert</i> -butylbenzene				[81-15-2]
	(312–348)	100.4	(327)		[87/4][56/3]
$\text{C}_{12}\text{H}_{16}\text{N}_2\text{O}_2$	N-benzoyl-N',N'-diethylurea	132.2±2.8	(298)	C	[00/28]
$\text{C}_{12}\text{H}_{16}\text{N}_2\text{O}_5$	1-methyl-4- <i>tert</i> -butyl-3-methoxy-2,6-dinitrobenzene				[83-66-9]
	(293–353)	102.9			[53/7][60/1]
$\text{C}_{12}\text{H}_{16}\text{N}_3\text{O}_3\text{PS}_2$	azinphos-ethyl				[2642-71-9]
	(326–420)	86.8	(341)		[87/4]
$\text{C}_{12}\text{H}_{16}\text{O}_2$	pentamethylbenzoic acid				[2243-32-5]
	(347–363)	111.5±1.7	(355)	ME	[88/10]
		113.4±1.8	(298)		[88/10]
$\text{C}_{12}\text{H}_{16}\text{O}_4$	benzo-12-crown-4	104.3±2.6	(298)	CGC-DSC	[14174-08-4]
$\text{C}_{12}\text{H}_{17}\text{NO}_2$	2,6-diisopropylnitrobenzene	81.0±1.0	(286)	GS	[00/25]
		80.6±1.0	(298)	GS	[00/25]
$\text{C}_{12}\text{H}_{18}$	hexamethylbenzene				[87-85-4]
		80		TGA	[97/29]
		81.4±0.1	(298)	C	[94/13]
	(288–304)	85.0±0.2	(298)	ME	[89/18]
		74.9±0.6		DSC	[84/2]
	(303–338)	85.2	(320)	A	[76/2]
		86.1	(298)		[76/2][93/16]
	(314–364)	83.2	(329)	A	[69/24]
		74.7±2		ME	[65/4][70/1]
		80.8			[57/1][60/1]
		80.8			[49/8]
$(\text{C}_{12}\text{H}_{18})-$ $(\text{C}_6\text{H}_3\text{N}_2\text{ClO}_4)$	(hexamethylbenzene)-(picryl chloride)				
		93.7			[49/8]
$\text{C}_{12}\text{H}_{18}$	<i>E,E,E</i> -1,5,9-cyclododecatriene				[676-22-2]
	(273–307)	75.2	(288)		[87/4]
		74.7±0.8			[73/16][77/1]
$\text{C}_{12}\text{H}_{18}\text{O}$	1-adamantyl methyl ketone				[1660-04-4]
	(287–305)	84.2±0.6	(298)	ME	[92/2]
$\text{C}_{12}\text{H}_{18}\text{O}$	<i>exo</i> -4-hydroxy- <i>endo</i> - <i>endo</i> -tetracyclo[6.2.1.1. <sup>3,6</sup> .0 <sup>2,7</sup> ]dodecane				[7273-98-5]
	(303–343)	79.0±2.5	(298)	TSGC	[80/16]
$\text{C}_{12}\text{H}_{18}\text{O}$	<i>exo</i> -4-hydroxy- <i>exo</i> - <i>endo</i> -tetracyclo[6.2.1.1. <sup>3,6</sup> .0 <sup>2,7</sup> ]dodecane				[107133-43-7]
	(323–353)	74.3±1.8		TSGC	[80/16]
		76.3±2.0	(298)		[80/16]
$\text{C}_{12}\text{H}_{18}\text{O}$	<i>exo</i> -4-hydroxy- <i>exo</i> - <i>exo</i> -tetracyclo[6.2.1.1. <sup>3,6</sup> .0 <sup>2,7</sup> ]dodecane				[74007-11-7]
	(313–353)	73.9±2		TSGC	[80/16]
		75.9±2.2	(298)		[80/16]
$\text{C}_{12}\text{H}_{18}\text{O}_2$	1-adamantyl-1-carboxylic acid methyl ester				[711-01-3]
	(267–283)	84.3±0.6	(275)	ME	[92/26]
		82.4±0.6	(298)		[92/26]
$\text{C}_{12}\text{H}_{18}\text{O}_2$	<i>trans-syn-trans</i> decahydro-3-hydroxy-2-naphthalene acetic $\gamma$ -lactone				
	(240–310)	NA		ME	[57/10]
$\text{C}_{12}\text{H}_{18}\text{O}_2$	<i>trans-anti-trans</i> decahydro-3-hydroxy-2-naphthalene acetic $\gamma$ -lactone				
	(240–310)	NA		ME	[57/10]
$\text{C}_{12}\text{H}_{19}\text{F}_3\text{N}_2\text{O}_4$	N[(N-trifluoroacetyl)valyl]alanine ethyl ester				
	(323–424)	115.5	(338)		[87/4][60/20]
$\text{C}_{12}\text{H}_{20}$	2,2-dimethyladamantane				[19740-34-2]
	(300–360)	73.6±1.3	(298)	BG	[77/11]
$\text{C}_{12}\text{H}_{20}$	1,3-dimethyladamantane	67.8±1.3 (liq)	(298)	EB	[702-79-4]
$\text{C}_{12}\text{H}_{20}\text{N}_2$	1-(1-piperidinyl)cyclohexanecarbonitrile	87.8±0.6	(298)		[77/11]
$\text{C}_{12}\text{H}_{20}\text{N}_2\text{O}_2$	N,N'-ethylenebis(4-aminopent-3-ene-2-one)				[3867-15-0]
					[97/28]
					[6310-76-5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(358–374)	128.2±0.7	(366)	ME	[95/12]
		131.6	(298)		[95/12]
$\text{C}_{12}\text{H}_{20}\text{O}_2$	bicyclo[2.2.1]heptane-7-one 2,2-dimethylpropylene ketal	84.0±0.9	(298)		[217467-40-8]
$\text{C}_{12}\text{H}_{22}\text{O}$	cyclododecanone	83.2±0.3	(298)	ME	[98/26]
$\text{C}_{12}\text{H}_{22}\text{O}$	<i>trans</i> 2-cyclohexylcyclohexanol	98.6±0.5	(320)	ME	[850-1-7]
$\text{C}_{12}\text{H}_{22}\text{O}_4$	dodecanedioic acid	153.1±2.9	(386)	ME	[97/5]
$\text{C}_{12}\text{H}_{22}\text{O}_{11}$	(375–296)	302±44.0	(481)	ME	[693-23-2]
$\text{C}_{12}\text{H}_{24}$	D cellobiose	76.2	(298)	CGC–DSC	[60/4][70/1]
	(474–488)	76.4±1.7			[528-50-7]
$\text{C}_{12}\text{H}_{24}\text{N}_2\text{O}_2$	cyclododecane	105.9	(298)		[99/1]
	dicyclohexyl ammonium nitrite	99.1	(294)	TE	[294-62-2]
	(290–298)	U161.8			[98/5]
$\text{C}_{12}\text{H}_{24}\text{O}_2$	(308–339)	127.9	(298)		[57/1]
	dodecanoic acid (lauric acid)	132.6	(300)	ME	[3129-91-7]
	(293–303)	140.2±3.3	(304)	ME	[87/4][65/19]
	(293–314)	117.2±2.9	(303)	ME	[61/1]
$\text{C}_{12}\text{H}_{24}\text{O}_3$	peroxydodecanoic acid	131.4±1.7	(298)	ME	[57/3]
$\text{C}_{12}\text{H}_{24}\text{O}_6$	(293–303)	128.1±2.3	(298)	CGC–DSC	[2388-12-7]
$\text{C}_{12}\text{H}_{25}\text{NO}$	18 crown-6	152.7±0.8	(358.5)	ME	[80/23]
$\text{C}_{12}\text{H}_{26}$	dodecanamide	100.2	(298)	B	[17455-13-9]
	(349–368)	101.7	(263)	B	[112-40-3]
$\text{C}_{12}\text{H}_{26}\text{O}$	<i>n</i> -dodecane	131.4±1.7	(298)	ME	[72/1]
	1-dodecanol	130.1±1.2	(290)		[63/6]
	(285–294)	129.3	(298)		[112-53-8]
$\text{C}_{12}\text{H}_{26}\text{O}$	di- <i>tert</i> -butyl-isopropylmethanol	59.3±0.8	(298)	ME	[65/6][87/4]
$\text{C}_{13}\text{H}_4\text{Cl}_6\text{O}$	1,2,4,5,7,8-hexachloroxanthene	147	(401)	T	[98/22]
	(353–449)	108.1±1.6	(358)	ME	[38178-99-3]
$\text{C}_{13}\text{H}_7\text{NO}_2$	benz[g]isoquinoline-5,10-dione	97.2±2.5	(337)	ME	[46492-08-4]
$\text{C}_{13}\text{H}_8\text{O}$	(334–381)	91.6±1.6	(336)	ME	[98/3]
$\text{C}_{13}\text{H}_8\text{O}$	perinaphthenone	93.9±1.6	(337)	ME	[548-39-0]
	(326–348)	87.6±0.3	(298)		[98/3]
$\text{C}_{13}\text{H}_8\text{O}$	fluorenone	88.4±0.4	(320)	GS	[486-25-9]
	(324–349)	92.2	(336)	GS	[98/21]
$\text{C}_{13}\text{H}_8\text{OS}$	thioxanthone	114.8±0.4	(298)	C	[98/21]
$\text{C}_{13}\text{H}_8\text{O}_2$	xanthone	98.57±0.4	(298)	C	[92/27]
$\text{C}_{13}\text{H}_8\text{O}_2$	3-hydroxy-1 <i>H</i> -phenalen-1-one	151.5±4.7	(417)	ME	[90-47-1]
	(402–432)	91.9	(319)		[88/13]
$\text{C}_{13}\text{H}_9\text{ClO}_2$	5-chloro-2-hydroxybenzophenone	86	(308)	UV	[5472-84-4]
	(293–367)	89.5±0.2	(430)	TGA	[98/3]
$\text{C}_{13}\text{H}_9\text{N}$	acridine	91.7±0.4	(333)	C	[85-19-8]
		94.5	(298)	C	[87/4][60/24]
			(298)	C	[260-94-6]
			(298)	C	[98/36]
			(298)	C	[94/14]
			(298)	C	[94/14]
			(298)	C	[89/26]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{13}\text{H}_9\text{N}$	(280–328)	92.6	(295)		[87/4]
	(303–328)	90.8±1.3	(298)	TE	[75/5]
	(303–326)	93.3±0.8	(298)	TCM	[U/1][75/5]
	(281–298)	91.6±2.5	(290)	LE	[75/1]
	(306–345)	92.8±1.3	(298)	ME	[U/2][75/5]
		78.7		E	[46/1]
	3,4-benzoquinoline (phenanthridine)				[260-27-3]
	(288–323)	100.1±10.1	(306)	ME	[98/3]
		98.6	(298)		[89/26]
	(288–323)	94.6±4	(308)	ME	[75/15][87/4]
		107.5		ME	[65/6]
$\text{C}_{13}\text{H}_9\text{N}$	5,6-benzoquinoline				[85-02-9]
	(288–323)	83.1±3.6	(308)	ME	[75/15][87/4]
$\text{C}_{13}\text{H}_9\text{N}$		106.3		ME	[72/10]
	7,8-benzoquinoline				[230-27-3]
		90.2±2.0	(298)		[89/26]
	(293–323)	80.8±2.5	(308)	ME	[75/15][87/4]
$\text{C}_{13}\text{H}_9\text{NO}$	acridone				[598-95-0]
		136.2±0.5	(298)	C	[92/27]
$\text{C}_{13}\text{H}_9\text{NO}_2$	N-methyl-1,8-naphthalimide				[2382-08-3]
	(379–398)	107.4±0.8	(389)	ME	[00/9]
		109.7±0.8	(298)	ME	[00/9]
$\text{C}_{13}\text{H}_{10}$	fluorene				[86-73-7]
		87.6	(298)	CGC-DSC	[98/5]
	(313–453)	84.9	(383)	GS	[95/7]
	(323–363)	84.9±0.4	(343)	GS	[94/2]
		85.1±0.4	(298)		[94/2]
	(318–333)	87.0±1.0	(318)	PG	[88/26]
		80.2±0.2	(298)	C	[87/10]
	(348–388)	78.9	(363)	IPM	[87/4][75/8]
	(283–323)	88.4±0.6	(303)	GS	[83/11]
	(350–388)	83.1±1.3			[77/7][75/8]
		81.8	(388)	B	[75/8]
	(286–300)	80.3±0.8	(293)	TE	[60/2]
	(306–323)	82.8	(315)		[53/13][87/4]
	(306–322)	82.8			[53/1][60/1]
$\text{C}_{13}\text{H}_{10}\text{N}_2$	9-aminoacridine				[90-45-9]
		115	(520)	TGA	[98/29]
$\text{C}_{13}\text{H}_{10}\text{N}_2\text{O}_2$	N-phenyl 4-nitrobenzaldehyde imine				[785-80-8]
		126±1.3	(298)		[97/18]
$\text{C}_{13}\text{H}_{10}\text{N}_4$	1,5-diphenyltetrazole				[7477-73-8]
	(348–363)	121.5±4.2	(355)	ME	[51/3][70/1]
$\text{C}_{13}\text{H}_{10}\text{N}_4$	2,5-diphenyltetrazole				[18038-45-7]
	(333–353)	119.7±4.2	(343)	ME	[51/3][70/1]
$\text{C}_{13}\text{H}_{10}\text{O}$	benzophenone				[119-61-9]
	(299–320)	92.4±2.2	(309)	GS	[98/21]
		93.1±2.2	(298)	GS	[98/21]
		94.7±1	(321)	DM	[83/2]
		92±0.83	(298)	C	[74/20][83/2]
	(295–313)	95.0±0.2	(304)	ME	[80/14]
		96.1			[78/15]
		84.4±1.13	(298)	C	[78/13]
	(297–317)	93.9±0.5	(307)	TE,ME	[77/4]
	(293–318)	95.0±1.5	(305)	TE	[75/5]
	(294–318)	92.9±0.8	(306)	ME	[75/6]
	(278–311)	77.0±2.5	(298)	ME	[74/5]
	(298–318)	89.96	(308)	ME	[87/4][74/6]
	(295–304)	94.6±0.8	(298)	TCM	[73/1]
		93.4±0.3	(298)	C	[72/1]
	(293–319)	96.1	(306)		[56/3]
		91.2			[50/2]
	(290–315)	78.2±1.2	(303)		[38/1][34/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{13}\text{H}_{10}\text{O}$		95±2.5	(298)	TE	[32/1][70/1] [60/1]
	(273–320) dibenzopyran	91.2±1.6	(298)	ME	[25/1] [229-95-8]
	(305–353)	92.5 112.1±2.1	(329)	T	[86/7] [58/2][70/1]
$\text{C}_{13}\text{H}_{10}\text{O}_2$	phenyl benzoate	99.0±0.4 89.5±4.2 96.2±1.7	(298)		[93-99-2] [71/2] [71/11][77/1] [47/2][70/1]
$\text{C}_{13}\text{H}_{10}\text{O}_3$	diphenyl carbonate	90±8.4	(298)	E	[102-09-0] [71/2][77/1]
$\text{C}_{13}\text{H}_{10}\text{O}_3$	phenyl salicylate	109.1	(294)	UV	[118-55-8] [87/4][60/24]
$\text{C}_{13}\text{H}_{10}\text{O}_3$	(279–315)	92±4.2			[47/2][70/1]
	2,4-dihydroxybenzophenone (312–353)	134	(327)	UV	[131-56-6] [87/4][60/24]
$\text{C}_{13}\text{H}_{10}\text{O}_4$	2,4,4'-trihydroxybenzophenone	139.0		TGA	[1470-79-7] [99/22]
$\text{C}_{13}\text{H}_{10}\text{O}_5$	2,2',4,4'-tetrahydroxybenzophenone	178.5 143.4	(378)	B UV	[131-55-5] [99/22] [87/4][60/24]
$\text{C}_{13}\text{H}_{11}\text{N}$	N-phenyl-benzaldehyde imine	97.4±1.2 98.1±1.2 93.7±0.9 85.5±2.1	(309) (298) (298) (293)	T C	[538-51-2] [97/18] [97/18] [86/10] [48/2]
	(294–326)				
	9-methylcarbazole (313–332)	95.0 95.5	(322) (298)	ME	[1484-12-4] [90/8] [90/8]
	N-phenylmethylene benzenamine N-oxide	115.0±0.8	(298)	C	[1137-98-8] [86/10]
$\text{C}_{13}\text{H}_{11}\text{NO}$	2-hydroxybenzaldehyde N-phenylimine (288–325)	115.9	(303)		[779-84-0] [87/4]
	(348–408)	129.9	(378)		[58/1]
$\text{C}_{13}\text{H}_{11}\text{NO}$	4-hydroxybenzaldehyde N-phenylimine (348–408)	127.9	(363)		[1689-73-2] [87/4]
	(288–338)	116	(313)		[58/1]
	benzanilide (352–369)	99.2	(360.5)		[93-98-1] [87/4][60/21]
$\text{C}_{13}\text{H}_{11}\text{NO}_2$	N-(2-hydroxyphenylmethylene)benzenamine N-oxide	116.5±1.4	(298)	C	[20357-59-9] [86/10]
$\text{C}_{13}\text{H}_{11}\text{N}_3\text{O}$	2-(2'-hydroxy-5'-methylphenyl)benzotriazole (293–333)	125.2	(308)	UV	[2440-22-4] [87/4][60/24]
$\text{C}_{13}\text{H}_{12}$	diphenylmethane (273–295)	88.5±0.8 87.6±0.8	(284) (298)	GS	[101-81-5] [99/23] [99/23]
	(273–298)	71.5	(286)	EM	[89/1]
	(276–295)	83.3±3.3	(286)	HSA	[86/1]
	(278–299)	82.4±8 64.0		V	[59/2][70/1] [51/1][60/1]
		72.0±0.8	(297)		[38/1]
$\text{C}_{13}\text{H}_{12}$	4-methylbiphenyl	80.2±1.4	(298)	C	[644-08-6] [97/27]
$\text{C}_{13}\text{H}_{12}\text{N}_2\text{O}$	1,3-diphenylurea (445–484)	152±6	(464)	TE	[102-07-8] [87/2]
$\text{C}_{13}\text{H}_{12}\text{N}_4\text{O}_2$	4'-nitro-2-methylaminoazobenzene	134.7		GS	[87/19][91/18]
$\text{C}_{13}\text{H}_{12}\text{O}$	diphenylmethanol	105.7±0.7	(298)		[91-01-0] [98/22]
$\text{C}_{13}\text{H}_{12}\text{O}$	4-benzylphenol (313–335)	97.4	(324)		[101-53-1] [87/4][60/14]
$\text{C}_{13}\text{H}_{13}\text{N}$	N-phenyl benzylamine				[103-32-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(293–312)	103.6±1.6 51.3	(303)	T	[97/10] [80/8]
$\text{C}_{13}\text{H}_{14}\text{N}_2$	2,2'-diaminodiphenylmethane				[6582-52-1]
	(343–403)	111.3	(358)		[87/4]
$\text{C}_{13}\text{H}_{16}\text{N}_2$	$\alpha$ -phenyl-1-piperidineacetonitrile				[5766-79-0]
		73.2±0.4	(298)		[97/28]
$\text{C}_{13}\text{H}_{16}\text{N}_2\text{O}_3$	hexahydro-1-(3-nitrobenzoyl)-1 <i>H</i> -azepine (compound is called hexamethyleneimine m-nitrobenzoate in paper)				[37000-08-1]
	(310–321)	113.0 104.6	(315)	ME	[72/8] [70/22][72/8]
$\text{C}_{13}\text{H}_{17}\text{NO}_3$	morpholine cinnamate				[87/4]
	(298–349)	118.8	(313)		
$\text{C}_{13}\text{H}_{19}\text{NO}_2$	cyclohexyl ammonium benzoate				[3129-92-8]
	(289–298)	103.1	(293.5)		[87/4][65/19]
$\text{C}_{13}\text{H}_{21}\text{NO}$	$N,N$ -dimethyl-1-adamantylcarboxamide				[1502-00-7]
	(303–322)	96.9±0.3 97.5±0.3	(313) (298)	ME ME	[93/18][95/11] [95/11]
$\text{C}_{13}\text{H}_{21}\text{NO}_2$	N-(3-phenoxy-2-hydroxypropyl)-butylamine				[3246-04-6]
	(323–348)	133.9	(335.5)		[87/4]
$\text{C}_{13}\text{H}_{22}$	1,3,5-trimethyladamantane				[707-35-7]
	(300–360)	77.8±1.3	(298)	BG	[77/11]
$\text{C}_{13}\text{H}_{22}\text{O}_3$	dicyclohexyl carbonate				[4427-97-8]
	(293–313)	66.5±4.2	(303)	ME	[71/11][77/1]
$\text{C}_{13}\text{H}_{26}\text{O}$	7-tridecanone				[462-18-0]
	(287–293)	103.8	(290)	ME	[38/3]
$\text{C}_{13}\text{H}_{26}\text{O}_2$	methyl dodecanoate				[111-82-0]
	(262–273)	121.8±2.1	(267)	ME	[65/6][87/4]
$\text{C}_{13}\text{H}_{26}\text{O}_2$	tridecanoic acid				[638-53-9]
	(282–299)	170		TPTD	[01/15]
$\text{C}_{13}\text{H}_{26}\text{O}_3$	peroxytridecanoic acid				[40915-96-6]
	(293–303)	142.7±5	(298)	ME	[80/23]
$\text{C}_{13}\text{H}_{27}\text{NO}$	$N$ -methyl dodecanamide				[27563-67-3]
	(323–337)	116.6±0.8	(330)	GS	[59/4][87/4]
$\text{C}_{13}\text{H}_{28}$	<i>n</i> -tridecane				[629-50-5]
		91.4	(298)	B	[72/1]
$\text{C}_{13}\text{H}_{28}$	tri- <i>tert</i> -butylmethane				[35660-96-9]
	(265–319)	55.4 57.0±0.4 57.7±2.8 61.1±1.3	(298) (288) (290)	CGC-DSC T HSA	[98/5] [97/7] [95/16] [95/16]
	(275–330)	7.7±0.1	(311)		[86/2]
$\text{C}_{13}\text{H}_{28}\text{O}$	tri- <i>tert</i> -butylmethanol				[41902-42-5]
plastic	(278–318)	56.5±1.0	(298)	TE	[83/18]
crystalline	(269–300)	63.2±1.2	(298)	TE	[83/18]
$\text{C}_{14}\text{H}_6\text{Cl}_2\text{N}_2\text{O}_4$	1-amino-4-nitro-5,8-dichloroanthraquinone	158.2			[66121-41-3] [68/10][88/24]
$\text{C}_{14}\text{H}_6\text{N}_2\text{O}_6$	1,4-dinitroanthraquinone	131.0			[66121-37-7] [68/10][88/24]
$\text{C}_{14}\text{H}_6\text{N}_6\text{O}_{12}$	1,2-bis(2,4,6-trinitrophenyl)ethylene				[20062-22-0] [87/4][69/12] [68/14][66/11]
	(434–479)	179.9 180.3	(449)	LE	
$\text{C}_{14}\text{H}_7\text{NO}_4$	1-nitroanthraquinone				[82-34-8]
	(407–440)	139.7 108.9±2.1 137.9±1.7 115.5	(422) (396)	TE C TE,ME	[87/4][70/4] [82/3] [70/4] [68/10][88/24]
$\text{C}_{14}\text{H}_8\text{Cl}_4$	1,1-dichloro-2,2-bis(4-chlorophenyl)ethylene				[72-55-9] [95/32][89/32]
		74.2			
$\text{C}_{14}\text{H}_8\text{Cl}_6$	1,1,1-trichloro-2-chloro-2,2-bis(4-chlorophenyl)ethane				[3563-45-9] [95/32][89/32]
		89.4			
$\text{C}_{14}\text{H}_8\text{O}_2$	9,10-anthraquinone				[84-65-1] [97/19][91/18] [82/3]
		111.3 108.4	(402)	GS C	

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(373–453)	98.3 113±0.8 107.5±0.8	(413) (298) (434)	GS C ME	[77/20][78/35] [73/10] [73/10]
	(397–471)	107.9±0.8		ME	[73/10]
	(355–356)	U 105.9		TGA	[71/17]
	(470–590)	127.0±3.0 136.6±3 116.1±1.7 115.1		C C ME,TE	[71/6] [71/6] [70/4] [68/10][88/24]
	(343–403)	126.4 112.1 110.9 107.9 104.6 108.0	(373) (298) (298) (367) (298)	ME	[58/1][87/4] [56/5][70/1] [56/1] [54/3] [52/3] [52/3]
C <sub>14</sub> H <sub>8</sub> O <sub>2</sub>	9,10-phenanthraquinone	108.1 132	(289) (383)	C	[84-11-7] [89/21] [56/5][70/1]
C <sub>14</sub> H <sub>8</sub> O <sub>3</sub>	1-hydroxy-9,10-anthraquinone	113.1		GS	[129-43-1]
	(333–383)	120.6 101.3±0.4	(358) (407)		[87/19][91/18] [58/1][87/4] [56/1]
C <sub>14</sub> H <sub>8</sub> O <sub>3</sub>	2-hydroxy-9,10-anthraquinone	136.8		GS	[605-32-3]
	(393–453)	153.1	(408)		[87/4]
C <sub>14</sub> H <sub>8</sub> O <sub>3</sub>	2,2'-biphenyldicarboxylic anhydride				[6050-13-1]
	(433–490)	91.4	(448)		[87/4]
C <sub>14</sub> H <sub>8</sub> O <sub>4</sub>	1,2-dihydroxyanthraquinone				[72-48-0]
	(368–498)	123.8 121.9±0.5 121.5±0.4 123.9	(383) (469) (469) (403)		[87/4] [73/4] [73/4] [58/1]
C <sub>14</sub> H <sub>8</sub> O <sub>4</sub>	1,4-dihydroxyanthraquinone	114.6 102.4±4.4 89.1 121.9±0.8 121.1±4 U 94.5 123.5 103.5±1.3		GS	[81-64-1] [87/19][91/18] [84/35] [77/20][78/35] [73/4] [73/4] [71/17] [58/1][87/4] [56/1]
C <sub>14</sub> H <sub>8</sub> O <sub>4</sub>	1,5-dihydroxyanthraquinone	123.2±7 126.8 111.3 117.6		ME	[117-12-4] [73/10] [58/1][87/4] [56/1] [56/1]
C <sub>14</sub> H <sub>8</sub> O <sub>4</sub>	1,8-dihydroxyanthraquinone	116.8 123 U 96.5 105.8±8 109.6±8		ME ME TGA HSA	[73/10] [58/1][87/4] [71/17] [56/1] [56/1]
C <sub>14</sub> H <sub>8</sub> O <sub>4</sub>	2,6-dihydroxyanthraquinone				[117-10-2]
	(463–533)	173.8	(498)		[84-60-6] [58/1][87/4]
C <sub>14</sub> H <sub>8</sub> O <sub>6</sub>	1,4,5,8-tetrahydroxyanthraquinone				[81-60-7]
	(403–473)	151.6	(438)		[58/1][87/4]
C <sub>14</sub> H <sub>9</sub> ClN <sub>2</sub> O <sub>4</sub>	1,5-diaminochloro-4,8-dihydroxyanthraquinone (C.I. disperse blue 56)				[12217-79-7]
	(483–533)	93.3	(498)		[87/4]
C <sub>14</sub> H <sub>9</sub> Cl <sub>5</sub>	1,1-bis-(4-chlorophenyl)-2,2,2-trichloroethane ( <i>p,p'</i> -DDT)				[50-29-3]
	(273–313)	120.2±1.0	(293)	GS	[94/1]
	(323–363)	115	(338)		[87/4]
	(293–353)	110	(304)	GS	[80/35]
	(293–313)	117.8	(303)	GS	[72/11]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{14}\text{H}_9\text{F}_3\text{O}_2$	(323–363)	117.5	(338)	GS	[56/4][60/1]
	(313–363)	84	(338)	GS	[49/10]
	(339–373)	118	(356)	TE	[47/1]
	4,4,4-trifluoro-1-(2-naphthyl)-butane-1,3-dione	$108.7 \pm 0.6$	(298)	ME	[893-33-4]
					[97/33]
$\text{C}_{14}\text{H}_9\text{NO}_2$	1-aminoanthraquinone	121.8		GS	[82-45-1]
	(413–443)	$126.5 \pm 1.3$	(428)	TE	[87/19][91/18]
	(368–393)	$116.3 \pm 3.9$	(380)		[87/4][70/4]
	(373–453)	103.3	(413)	GS	[84/35]
	(361–386)	U 90.9	(374)	TGA	[77/20][78/35]
		$125.9 \pm 2.5$		TE,ME	[71/17]
		131.0			[70/4]
		$113 \pm 0.4$	(463)	HSA	[68/10][88/24]
$\text{C}_{14}\text{H}_9\text{NO}_2$	2-aminoanthraquinone	136.8		GS	[56/1]
		$143.5 \pm 2.9$		TE,ME	[117-79-3]
		162.3			[87/19][91/18]
					[70/4]
$\text{C}_{14}\text{H}_9\text{NO}_3$	1-hydroxy-4-aminoanthraquinone	127.2		GS	[68/10][88/24]
	(418–438)	$131.3 \pm 1.7$	(428)	TE	[116-85-8]
	(444–473)	144	(458.5)		[87/4][70/4]
		119.6			[87/4]
		$133.5 \pm 2.1$		TE,ME	[84/40]
$\text{C}_{14}\text{H}_9\text{N}_3\text{O}_4$	1,4-diamino-5-nitroanthraquinone	120.1			[70/4]
	(373–453, not crystalline)	U50.2	(413)	GS	[68/10][88/24]
$\text{C}_{14}\text{H}_{10}$	anthracene				[82-33-7]
	(423–488)	94.5		MEM	[77/20][78/35]
$\text{C}_{14}\text{H}_{10}$		99.4	(298)	CGC–DSC	[120-12-7]
	(318–363)	$100.0 \pm 2.8$	(341)	ME	[98/5]
	(343–448)	$84.0 \pm 3.0$	(298)	TGA	[98/3]
	(313–453)	99.7	(383)	GS	[97/38]
	(318–373)	98.7	(346)	GS	[95/7]
	(313–363)	102.6	(338)	GS	[86/7]
	(353–399)	94.3	(376)	GS	[86/8]
	(283–323)	$91.8 \pm 0.9$	(303)	GS	[83/3]
	(323–353)	91.2	(338)	GS	[83/11]
		97.4±1.1		GS,C	[82/23]
		97.8±0.1		HSA	[81/3]
	(337–361)	$104.5 \pm 1.5$	(298)	TE,ME	[80/3]
	(358–393)	94.8	(376)	GS	[79/27]
	(363–448)	$98.8 \pm 0.4$		HSA	[77/8]
	(328–372)	97.2		ME	[76/8]
		97.1		C	[75/20]
	(323–353)	$102.9 \pm 4.8$	(298)	TE	[75/5]
$\text{C}_{14}\text{H}_{10}$	(283–323)	95.8±6		LE	[73/15]
	(353–432)	$101.0 \pm 0.5$		ME	[73/2]
		99.7	(393)	C	[73/2]
	(290–358)	84.1		ME,C	[73/2]
	(342–359)	$98.3 \pm 2.1$			[72/9][71/6]
	(327–346)	90±1.3	(337)	TE	[64/3][70/1]
		100.8			[60/2]
	(303–373)	$103.4 \pm 2.9$			[58/1][70/1]
		$100.8 \pm 4.2$			[58/1][70/1]
	(396–421)	97.5±2		HSA	[58/1][70/1]
$\text{C}_{14}\text{H}_{10}$	(339–353)	102.1	(346)		[53/2]
	(338–353)	$102.1 \pm 2.1$			[53/13]
		92.0±2.1	(364)	ME	[53/1][70/1]
		90.4	(353)	ME	[52/3]
		95.4			[51/12]
		95.0			[51/6]
	(378–398)	$97.3 \pm 1.2$		RG	[50/5]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{14}\text{H}_{10}$	diphenylacetylene	104.6±4.2			[49/6][70/1]
		93.3±4.2	(353)		[38/1]
		95.3	(298)	CGC–DSC	[501-65-5]
		95.1±1.1	(298)	ME	[98/5]
		90.0±4.5	(310)	HSA	[93/5]
$\text{C}_{14}\text{H}_{10}$	phenanthrene	88.7±1.25	(313)		[86/1]
		92±1		LE	[38/1]
		90.5	(298)	CGC–DSC	[82/1]
		95.0±4.4	(318)	ME	[98/3]
		88.9	(383)	GS	[95/7]
		87.2±1.1	(350)	DSC	[88/4]
		90.9±1.7	(298)	DSC	[88/4]
		82±2	(340)	TE	[83/27]
		95.0±0.6	(303)	GS	[83/11]
		92.5±2	(298)	TE,ME	[80/1]
		87.2	(345)	GS	[79/27]
		87.2	(372)	B	[75/8]
		87.4±0.8	(298)	TE	[75/5]
		86.6±0.8	(298)	TCM	[U/1][75/5]
		90.9±0.4	(298)	C	[72/1][77/1]
$\text{C}_{14}\text{D}_{10}$	phenanthrene-d <sub>10</sub>	84.1±2.5	(297)	TE	[60/2]
		95.9	(303)		[58/1][70/1]
		86.6			[53/1][70/1]
		90.7±1.2	(315)	ME	[60/1]
		81.6	(323)	ME	[52/3]
$\text{C}_{14}\text{H}_{10}\text{F}_4$	1,1,2,2-tetrafluoro-1,2-diphenylethane	92.9			[51/12]
		84.1±0.8	(313)		[49/6][70/1]
$\text{C}_{14}\text{H}_{10}\text{N}_2\text{O}_2$	1,4-diaminoanthraquinone	101.8	(298)		[38/1]
		143.0		GS	[1517-22-2]
		92.2±1.1	(303)	GS	[83/11]
		151.2±1.3	(461)		[425-32-1]
		136.0			[97/34]
		102.6±9.7	(390)		[128-95-0]
		123	(413)	GS	[87/19][91/18]
		149.2±2.5		TE,ME	[87/4][70/4]
		123.4			[84/40]
		138.1		GS	[77/20][78/35]
$\text{C}_{14}\text{H}_{10}\text{N}_2\text{O}_2$	1,5-diaminoanthraquinone	118.5±4.8	(416)		[70/41]
		(405–427)			[68/10][88/24]
$\text{C}_{14}\text{H}_{10}\text{O}$	anthrone	103.0±0.8	(350)	GS	[67/16][91/18]
		106.1±0.8	(298)	GS	[129-44-2]
		103.3	(298)		[84/35]
		99.6	(354)	C	[90-44-8]
$\text{C}_{14}\text{H}_{10}\text{O}_2$	benzil	98.4±1.1	(329)		[91/12]
		82.8			[134-81-6]
		(319–340)			[59/2][70/1]
$\text{C}_{14}\text{H}_{10}\text{O}_3$	benzoic anhydride	96.2±4.2	(298)	B	[87/4]
		96.7±4.2			[38/1][38/2]
$\text{C}_{14}\text{H}_{10}\text{O}_4$	benzoyl peroxide	97.9±2.5	(298)	ME	[60/1]
		(310–340)			[75/9]
		89.7±4.2	(303)	ME	[71/11][77/1]
$\text{C}_{14}\text{H}_{10}\text{O}_4$	diphenyl oxalate				[3155-16-6]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		102.5±8.4		B	[71/2][77/1]
C <sub>14</sub> H <sub>10</sub> O <sub>4</sub>	2,2'-biphenyldicarboxylic acid (433–493)	166.1	(448)		[482-05-3]
C <sub>14</sub> H <sub>10</sub> O <sub>5</sub>	O-phenyl-O,O-benzoyl peroxy carbonate	97.9±2.5			[87/4]
		133.9±4.2		E	[962-16-3]
					[75/9][77/1]
C <sub>14</sub> H <sub>11</sub> FO <sub>3</sub>	2'-fluoro-2-hydroxy-4-methoxybenzophenone (307–318)	109.3	(312.5)	EV	[3119-88-8]
C <sub>14</sub> H <sub>11</sub> FO <sub>3</sub>	3'-fluoro-2-hydroxy-4-methoxybenzophenone (322–343)	U 17.3	(332.5)	EV	[87/4][66/6]
C <sub>14</sub> H <sub>11</sub> FO <sub>3</sub>	4'-fluoro-2-hydroxy-4-methoxybenzophenone (322–343)	U 37.7	(332.5)	EV	[3506-35-2]
C <sub>14</sub> H <sub>11</sub> F <sub>3</sub>	1,1,2-trifluoro-1,2-diphenylethane	93.1	(298)		[3602-47-9]
					[87/4][66/6]
C <sub>14</sub> H <sub>11</sub> N <sub>3</sub> O <sub>2</sub>	1,4,5-triaminoanthraquinone (373–453)	U70.3	(413)	GS	[68936-77-6]
C <sub>14</sub> H <sub>12</sub>	9,10-dihydroanthracene (313–453)	93.9	(383)	GS	[97/34]
	(318–379)	92.4±4		ME	[6407-69-8]
		94.2±0.8	(298)	ME	[87/4][78/35]
	(319–377)	92.2±0.6		C	[75/12]
		93.9±0.6	(298)	C	[75/12]
	(279–328)	93.3±4	(304)		[58/1][70/1]
		89.5	(388)		[51/2][60/1]
C <sub>14</sub> H <sub>12</sub>	<i>trans</i> -diphenylethene (298–343)	102.0	(298)	CGC-DSC	[103-30-0]
		99.6	(313)		[98/5]
		U 61.1		MS	[87/4]
	(293–338)	103.8±2.5	(315)		[83/9]
		100.7±0.4	(298)	SRFG	[83/16]
				TE,ME,DM	[73/1]
	(310–340)	99.6±1.7	(298)	TE	[75/5]
		102.1±0.6		TCM	[72/1]
		99.2±0.4			[55/5]
C <sub>14</sub> H <sub>12</sub>	9-methylfluorene (303–315)	86.5±0.1	(309)	TM	[2523-37-7]
	(318–358)	82.8±0.3	(338)	B	[94/2]
		82.8±0.3	(298)		[94/2]
C <sub>14</sub> H <sub>12</sub> F <sub>2</sub>	1,1-difluoro-1,2-diphenylethane	94.7±0.9	(298)		[350-62-9]
C <sub>14</sub> H <sub>12</sub> N <sub>2</sub>	N-methyl-9-acridinamine	107	(480)	TGA	[97/34]
C <sub>14</sub> H <sub>12</sub> N <sub>2</sub>	10-methyl-9-acridinimine	94	(550)	TGA	[22739-29-3]
C <sub>14</sub> H <sub>12</sub> N <sub>2</sub>	dibenzylideneazine	93.3±2.1	(293)		[98/29]
C <sub>14</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub>	<i>cis</i> -5a,6,11a,12-tetrahydro[1,4]benzothiazino[3,2-b][1,4]benzoxazine (383–392)	122.0	(387)	ME	[5291-44-1]
		129.0±1.3	(298)		[97/1]
C <sub>14</sub> H <sub>12</sub> N <sub>2</sub> S <sub>2</sub>	<i>cis</i> -5a,6,11a,12-tetrahydro[1,4]benzothiazino[3,2-b][1,4]-benzothiazine (383–392)	118.0	(387)	ME	[16545-33-1]
		123.3±1.2	(298)		[97/1]
C <sub>14</sub> H <sub>12</sub> N <sub>4</sub> O <sub>2</sub>	1,4,5,8-tetraminoanthraquinone (373–453)	U82	(413)	GS	[97/1]
C <sub>14</sub> H <sub>12</sub> O	desoxybenzoin	99.3±4.2			[451-40-1]
C <sub>14</sub> H <sub>12</sub> O <sub>2</sub> S	E-(2-phenylethenyl)sulfonylbenzene (phenyl <i>trans</i> -B-styrylsulfone)	105±3.8		B	[47/2][70/1]
C <sub>14</sub> H <sub>12</sub> O <sub>3</sub>	2-hydroxy-4-methoxybenzophenone (281–337)	118.9	(296)	UV	[16212-06-9]
	(308–323)	U39.7	(315)	EV	[69/11][77/1]
C <sub>14</sub> H <sub>12</sub> O <sub>4</sub>	2,2'-dihydroxy-4-methoxybenzophenone				[131-57-7]
					[87/4][60/24]
					[66/6]
					[131-53-3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{14}\text{H}_{12}\text{O}_4$		103.8		B	[99/22]
	(303–342)	228	(318)	UV	[87/4][60/24]
	2,4-dihydroxy-4'-methoxybenzophenone	138.3		B	[131-53-3]
$\text{C}_{14}\text{H}_{13}\text{N}$	N-ethylcarbazole			B	[99/22]
	(310–329)	98.4±0.3	(319)	ME	[90/8]
		99.1±0.3	(298)	ME	[90/8]
$\text{C}_{14}\text{H}_{13}\text{NO}$	N,N-diphenylacetamide				[519-87-9]
	(343–376)	122.7	(358)		[87/4]
$\text{C}_{14}\text{H}_{13}\text{NO}_2$	N-(4-methoxyphenylmethylene) benzenamine N-oxide				[3585-93-1]
		130.6±1.2	(298)	C	[86/10]
$\text{C}_{14}\text{H}_{14}$	2,2'-dimethylbiphenyl				[605-39-0]
	(283–288)	65.7	(285)	ME	[74/6][87/4]
$\text{C}_{14}\text{H}_{14}$	3,3'-dimethylbiphenyl				[612-75-9]
	(288–308)	71.9	(298)	ME	[74/6]
$\text{C}_{14}\text{H}_{14}$	4,4'-dimethylbiphenyl				[613-33-2]
		95.1±2.0	(298)	C	[97/27]
$\text{C}_{14}\text{H}_{14}$	1,2-diphenylethane				[103-29-7]
	(293–323)	92.9	(308)	EM	[89/1]
	(273–318)	91.2±0.4	(295)		[83/16]
		91.5±0.7	(298)	B	[80/27]
		91.4±0.5	(298)	C	[72/1]
	(286–307)	84.1±0.4		V	[59/2][70/1]
	(290–317)	72.4±1.3	(304)	ME	[51/1]
		73.2			[38/1][60/1]
					[38/2]
$\text{C}_{14}\text{H}_{14}\text{FN}_3$	N,N-dimethyl-4-[(4-fluorophenyl)azo]benzenamine				[150-74-3]
		91.2		UV	[84/39]
$\text{C}_{14}\text{H}_{14}\text{FN}_3\text{O}_2\text{S}$	4-[[4-(dimethylamino)phenyl]azo]benzenesulfonyl chloride				[4644-89-7]
		105.6		UV	[84/39]
$\text{C}_{14}\text{H}_{14}\text{NO}_3$	bis(4-methoxyphenyl)nitrogen oxide				[2643-00-7]
	(328–363)	100.7	(343)		[87/4][65/7]
$\text{C}_{14}\text{H}_{14}\text{N}_2$	N,N'-diphenylacetamide				[621-09-0]
	(343–383)	122.6±3.8	(363)	ME	[58/12]
$\text{C}_{14}\text{H}_{14}\text{N}_2\text{O}$	p-azoxyanisole				[1562-94-3]
		134.8±3.7	(298)	C	[93/11]
$\text{C}_{14}\text{H}_{14}\text{N}_2\text{O}_2$	4-(2-hydroxyethoxy)azobenzene				[56/14][91/18]
		120.9		GS	[3837-55-6]
$\text{C}_{14}\text{H}_{14}\text{N}_4\text{O}_2$	3-nitro-4'-(N,N-dimethylamino)azobenzene				[67/7]
	(388–412)	133.9±3.8	(400)	ME	[67/7][87/4]
	(392–410)	133.1±3.8	(401)	TE	[67/7][87/4]
$\text{C}_{14}\text{H}_{14}\text{N}_4\text{O}_2$	4-nitro-4'-(N,N-dimethylamino)azobenzene				[2491-74-9]
	(413–425)	134.3±7.5	(419)	ME	[67/7][66/18]
	(414–428)	135.1±0.9	(421)	TE	[67/7][87/4]
		134.3		ME	[56/14][91/18]
$\text{C}_{14}\text{H}_{14}\text{O}$	1,1-diphenylethanol				[599-67-7]
		105.0±0.8	(298)		[98/22]
$\text{C}_{14}\text{H}_{14}\text{O}_2\text{S}$	dibenzyl sulfone				[620-32-6]
		125.5±2.9			[U/3][70/1]
$\text{C}_{14}\text{H}_{14}\text{O}_2\text{S}$	di-p-tolyl sulfone				[599-66-6]
		109.6±2.9			[U/3][70/1]
$\text{C}_{14}\text{H}_{14}\text{O}_8$	1,2,4,5-tetramethoxycarbonylbenzene				[635-10-9]
	(371–391)	140.4±0.8	(381)	ME	[95/6]
		143.3±0.8	(298)		[95/6]
		135.9±1.3	(298)		[67/8][95/6]
$\text{C}_{14}\text{H}_{14}\text{S}$	dibenzyl sulfide				[538-74-9]
		93.3±5		E	[62/5][70/1]
$\text{C}_{14}\text{H}_{15}\text{N}_3$	4-(N,N-dimethylamino)azobenzene				[60-11-7]
	(346–354)	117.6±1.7	(350)	ME	[67/7]
	(352–354)	115.9±1.3	(353)	TE	[67/7]
		120.9±1.7	(373)	ME	[56/2][87/4]
$\text{C}_{14}\text{H}_{15}\text{N}_3$	(E) 4-(N,N-dimethylamino)azobenzene				[25548-37-2]
		132±8	(381)	TE	[85/22]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{14}\text{H}_{15}\text{N}_3$	2,3'-dimethyl-4-aminoazobenzene	112.5		GS	[87/19][91/18]
$\text{C}_{14}\text{H}_{16}$	1,4,5,8-tetramethylnaphthalene	$99.8 \pm 1.4$	(298)	C	[2717-39-7] [74/14][77/1]
$\text{C}_{14}\text{H}_{16}\text{ClN}_3\text{O}_2$	{1-(4-chlorophenoxy)-3,3-dimethyl-1-(1 <i>H</i> -1,2,4-triazol-1- <i>y</i> 1)}butanone (Triadimefon)	$111.1 \pm 2.2$	(303)	GS	[43121-43-3] [97/6]
$\text{C}_{14}\text{H}_{16}\text{O}_5$	benzoyl(3-cyclohexyloxy)carbonyl peroxide (293–313)	$96.2 \pm 4.2$	(303)	ME	[20666-86-8] [71/11][77/1]
$\text{C}_{14}\text{H}_{18}\text{N}_2\text{O}_5$	2,6-dimethyl-3,5-dinitro-4- <i>tert</i> -butylacetophenone (293–353)	107.9	(323)	ME	[81-14-1] [53/7][60/1]
$\text{C}_{14}\text{H}_{18}\text{O}$	diamantanone	$103.1 \pm .62$	(320)	TSGC	[30545-23-4] [80/4]
$\text{C}_{14}\text{H}_{18}\text{O}_2$	6,6-dimethyl-1-phenyl-4,8-dioxaspiro[2.5]octane	$97.5 \pm 0.3$	(298)		[180988-52-7] [98/26]
$\text{C}_{14}\text{H}_{20}$	1,8-cyclotetradecadiyne (315–364)	87.6 ± 1.0 94.3	(338) (298)	HSA CGC-DSC	[1540-80-3] [98/5] [98/5]
$\text{C}_{14}\text{H}_{20}$	1,2,3,4,5,6,7,8-octahydroanthracene (octracene) (438–499)	$166.0 \pm 3.2$	(325)	ME	[64/1][70/1] [1079-71-6] [71/1][77/1]
$\text{C}_{14}\text{H}_{20}$	diadamantane (305–333)	82.3 ± 1.2 96.0 ± 0.8 117.2 ± 8	(298) (319)	BG TSGC	[2292-79-7] [75/2] [71/9]
$\text{C}_{14}\text{H}_{20}\text{O}$	diamantan-1-ol (319–349)	118. ± 0.6	(334)		[30545-14-3] [80/4][75/2]
$\text{C}_{14}\text{H}_{20}\text{O}$	diamantan-3-ol (323–354)	116.1 ± 4.4	(338)		[30545-24-5] [80/4][75/2]
$\text{C}_{14}\text{H}_{20}\text{O}$	diamantan-4-ol (322–353)	117.8 ± 0.2	(337)		[30651-03-7] [80/4][75/2]
$\text{C}_{14}\text{H}_{20}\text{O}_5$	benzo-15-crown-5	$123.2 \pm 2.0$	(298)	CGC-DSC	[14098-44-3] [00/11]
$\text{C}_{14}\text{H}_{21}\text{F}_3\text{N}_2\text{O}_4$	proline, 1-[N-(trifluoroacetyl)-1-leucyl]methyl ester (313–366)	121.3	(328)		[87/4][60/20] [121678-88-4]
$\text{C}_{14}\text{H}_{21}\text{NO}$	4-isopropylbenzylidene <i>t</i> -butylamine N-oxide	$101.8 \pm 4.1$	(298)	C	[89/15]
$\text{C}_{14}\text{H}_{22}$	1,4-di- <i>tert</i> -butylbenzene (288–333)	82.1 ± 0.4 82.8 ± 0.4	(310) (298)	T	[1012-72-2] [98/14] [98/14]
$\text{C}_{14}\text{H}_{22}\text{O}$	2,6-di- <i>tert</i> -butylphenol	82.8	(305)	ME,RG	[51/5][87/4] [128-39-2]
$\text{C}_{14}\text{H}_{22}\text{O}$		84.6 ± 0.5 81.5 ± 2.3 U110.9	(298) (298) (298)	GS C C	[99/17] [99/21] [71/24][99/17]
$\text{C}_{14}\text{H}_{22}\text{O}$	2,4-di- <i>tert</i> -butylphenol (288–327)	86.1 ± 0.3 86.7 ± 0.3 92.9 ± 2.8	(308) (298) (298)	GS	[96-76-4] [99/13] [99/13] [99/21]
$\text{C}_{14}\text{H}_{22}\text{O}$	3,5-di- <i>tert</i> -butylphenol (302–325)	97.7 ± 3.7 68.2	(298) (313.5)		[1138-52-9] [01/17] [87/4]
$\text{C}_{14}\text{H}_{22}\text{O}$	4- <i>tert</i> -octylphenol (297–351)	96.3 ± 0.9 97.9 ± 0.9	(324) (298)	GS	[124765-79-3] [99/13] [99/13]
$\text{C}_{14}\text{H}_{22}\text{O}_2$	3,5-di- <i>tert</i> -butyl-1,2-dihydroxybenzene (313–346)	103.7 ± 0.5 104.7 ± 0.5 100.1 ± 0.6	(330) (298) (298)	GS	[1020-31-1] [00/21] [00/21] [84/20]
$\text{C}_{14}\text{H}_{22}\text{O}_2$	2,5-di- <i>tert</i> -butyl-1,4-dihydroxybenzene (333–368)	108.8 ± 1.7 122.4 ± 1.7	(351) (298)	GS	[88-58-4] [99/28] [99/28]
$\text{C}_{14}\text{H}_{22}\text{O}_6$	dicyclohexyl peroxydicarbonate	100.4 ± 4.2			[1561-49-5] [71/11][77/11]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{14}\text{H}_{24}$	(293–313)	100.4±8.3	(303)	ME	[62/3][70/1] [28071-99-0]
	<i>trans-anti-trans</i> perhydroanthracene	66.1	(284)		[87/4]
	(275–313)	72.7±3.3	(294)	ME	[63/2][70/1] [1755-19-7]
$\text{C}_{14}\text{H}_{24}$	<i>trans-syn-trans</i> perhydroanthracene	88.1	(308)		[87/4]
	(293–335)	87.4±2.4	(365)	ME	[63/2][70/1] [1687-36-1]
	(335–393)	83.7±1.3	(298)	BG	[77/11]
$\text{C}_{14}\text{H}_{24}$	1,3,5,7-tetramethyladamantane	81.1±10.9	(305)	TSGC	[75/2]
	(310–350)				
$\text{C}_{14}\text{H}_{26}\text{O}$	cyclotetradecanone	80.75			[295-17-0]
					[38/1][60/1]
$\text{C}_{14}\text{H}_{28}$	cyclotetradecane	95.6	(298)	CGC-DSC	[295-17-0]
	(300–321)	97.9±1.7	(310)	HSA	[98/5]
	(295–307)	134.8±1.5	(301)	ME	[92/1]
	(285–290)	89.3±0.4	(287)	TM	[64/1][70/1] [55/5]
$\text{C}_{14}\text{H}_{28}\text{O}$	2-tetradecanone	130.9±0.5	(298)	C	[2345-27-9]
$\text{C}_{14}\text{H}_{28}\text{O}_2$	tetradecanoic acid (myristic acid)	174		TPTD	[79/8]
	(282–305)	139.7±3.8	(318)	ME	[544-63-8]
	(312–325)				[01/15]
$\text{C}_{14}\text{H}_{28}\text{O}_3$	peroxytetradecanoic acid	156.0±4.1		ME	[61/1][70/1]
	(293–303)				[19816-73-0]
$\text{C}_{14}\text{H}_{29}\text{NO}$	tetradecanamide	167.4±2.5	(352)	ME	[80/23]
	(248–375)				[638-58-4]
$\text{C}_{14}\text{H}_{30}$	<i>n</i> -tetradecane	117.6	(298)	B	[59/3][87/4]
					[629-59-4]
$\text{C}_{14}\text{H}_{30}\text{O}$	1-tetradecanol	126.0±0.6			[72/1]
	(293–307)	143.9	(300)	ME	[112-72-1]
$\text{C}_{15}\text{H}_{10}\text{O}$	diphenylcyclopropenone	119.7±8	(365)	HSA	[65/6]
	(353–378)	141±4	(333)	ME	[886-38-4]
	(323–343)				[85/3]
$\text{C}_{15}\text{H}_{10}\text{O}_2$	$\alpha$ -benzoyloxyphthalide	U 125.3	(366)		[76/9][87/4]
	(343–388)				[89/9]
$\text{C}_{15}\text{H}_{10}\text{O}_3$	1-methoxy-9,10-anthraquinone	128.0		GS	[82-39-3]
		106.6	(385)	HSA	[87/19][91/18]
$\text{C}_{15}\text{H}_{10}\text{O}_3$	2-methoxy-9,10-anthraquinone	124.7		GS	[56/1]
		118.4±0.4	(419)	HSA	[3274-20-2]
$\text{C}_{15}\text{H}_{11}\text{F}_3\text{O}_3$	2-hydroxy-2'-trifluoromethyl-4-methoxybenzophenone				[87/19][91/18]
	(323–363)	U 13.3	(338)	EV	[3119-86-6]
$\text{C}_{15}\text{H}_{11}\text{F}_3\text{O}_3$	2-hydroxy-3'-trifluoromethyl-4-methoxybenzophenone	103.8	(318)	EV	[87/4][66/6]
	(313–323)				[7396-89-6]
$\text{C}_{15}\text{H}_{11}\text{F}_3\text{O}_3$	2-hydroxy-4'-trifluoromethyl-4-methoxybenzophenone	91	(323)	EV	[87/4][66/6]
	(313–333)				[7396-90-9]
$\text{C}_{15}\text{H}_{11}\text{N}$	2-phenylquinoline	103.1±0.8	(344)	ME	[87/4][66/6]
	(337–351)	105.4±0.9	(298)		[612-96-4]
$\text{C}_{15}\text{H}_{11}\text{NO}_2$	1-amino-2-methyl-9,10-anthraquinone				[97/14]
	(360–388)	124.6±7.3	(374)		[82-28-0]
$\text{C}_{15}\text{H}_{11}\text{NO}_2$	1-(N-methylamino)-9,10-anthraquinone	112.6			[84/35]
		115.9±3.5	(373)		[82-38-2]
		123.8±3.3	(395)	ME	[84/40]
		123.8±3.2		ME	[84/35]
		115.5±0.4	(461)	HSA	[60/8][87/4]
		114.7±3	(406)	HSA	[64/11][91/18]
$\text{C}_{15}\text{H}_{11}\text{NO}_4$	1-amino-2-methoxy-4-hydroxy-9,10-anthraquinone	132.0			[56/1]
					[56/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{15}\text{H}_{11}\text{N}_3\text{O}_2$	4-hydroxy-3-(phenylazo)-2(1 <i>H</i> )-quinolinone (Disperse Yellow 4)				[6407-80-3]
	127.2				[68/10][88/24]
$\text{C}_{15}\text{H}_{12}$	9-methylanthracene	98.9		RG	[779-02-2]
$\text{C}_{15}\text{H}_{12}\text{N}_2\text{O}_2$	1-amino-4-(N-methylamino)anthra-9,10-quinone	140.6		GS	[58/4]
$\text{C}_{15}\text{H}_{12}\text{N}_2\text{O}_3$	1,4-diamino-2-methoxyanthra-9,10-quinone	147.0			[1220-94-6]
	151.9				[67/16][91/18]
$\text{C}_{15}\text{H}_{12}\text{O}$	dibenzosuberone	109.3	(298)	B	[2872-48-2]
					[84/40]
$\text{C}_{15}\text{H}_{12}\text{O}$	5,7-dihydro-6 <i>H</i> -dibenzo[a,c]cyclohepten-6-one			GS	[67/16][91/18]
(333–347)	93.4±0.8	(340)			[1210-35-1]
	95.6±0.8	(298)			[98/21]
$\text{C}_{15}\text{H}_{12}\text{O}_2$	dibenzoylmethane	115.7±0.9	(298)	ME	[1139-82-8]
$\text{C}_{15}\text{H}_{13}\text{ClN}_2\text{O}_5$	gallocyanine (C.I. Disperse Blue 95)	88.2	(448)		[98/21]
(433–493)					[87/4]
$\text{C}_{15}\text{H}_{13}\text{NO}_2$	N-benzoyl-N-methylbenzamide	116.8±0.4	(356)	ME	[23825-32-3]
(246–269)	120.1±0.4	(298)			[97/12]
$\text{C}_{15}\text{H}_{14}\text{Cl}_2\text{N}_4\text{O}_3$	4-(N-methyl-N-2-hydroxyethylamino)-4'-nitro-2',6'-dichloroazobenzene				[6232-56-0]
	135.1				[68/10][88/24]
$\text{C}_{15}\text{H}_{14}\text{F}_3\text{N}_3$	N,N-dimethyl-4-[[4-(trifluoromethyl)phenyl]azo]benzenamine	95.8		UV	[405-82-3]
					[84/39]
$\text{C}_{15}\text{H}_{14}\text{F}_3\text{N}_3\text{O}$	N,N-dimethyl-4-[[4-(trifluoromethoxy)phenyl]azo]benzenamine	96.8		UV	[1494-75-3]
					[84/39]
$\text{C}_{15}\text{H}_{14}\text{F}_3\text{N}_3\text{S}$	N,N-dimethyl-4-[[4-[(trifluoromethyl)thio]phenyl]azo]benzenamine	100.8		UV	[1494-77-5]
					[84/39]
$\text{C}_{15}\text{H}_{14}\text{N}_2$	N,N-dimethyl-9-acridinamine	86	(510)	TGA	[3295-59-8]
$\text{C}_{15}\text{H}_{14}\text{N}_2$	N-methyl-10-methylacridinimine	72	(480)	TGA	[213623-43-9]
$\text{C}_{15}\text{H}_{14}\text{O}$	4,5,6-trimethylbenzoxalene	139.7±2.5			[10435-68-4]
$\text{C}_{15}\text{H}_{14}\text{O}$	1,3-diphenyl-2-propanone	89.1±5			[66/3][70/1]
					[102-04-5]
$\text{C}_{15}\text{H}_{14}\text{O}_2$	2,2-diphenyl-1,3-dioxalane	99.7±1.1	(298)		[54/2][77/1]
$\text{C}_{15}\text{H}_{14}\text{O}_2\text{S}$	(Z)-1-methyl-4-(2-phenylethenyl)sulfonyl benzene	116.3±3.8		B	[70/1]
$\text{C}_{15}\text{H}_{14}\text{O}_2\text{S}$	(E)-1-methyl-4-(2-phenylethenyl)sulfonyl benzene	108.4±2.5		B	[16212-08-1]
$\text{C}_{15}\text{H}_{14}\text{O}_4$	2-hydroxy-4,4'-dimethoxybenzophenone	121.1		B	[69/11][77/1]
$\text{C}_{15}\text{H}_{14}\text{O}_5$	2,2'-dihydroxy-4,4'-dimethoxybenzophenone	130.2		B	[631-38-0]
	147.0			UV	[99/22]
					[131-54-4]
$\text{C}_{15}\text{H}_{15}\text{N}_3\text{O}_2$	N-[4-[(2-hydroxy-5-methylphenyl)azo]phenyl]acetamide (Disperse Yellow 3)	107	(434)	GS	[89/29]
(403–465)	140.6				[68/10][88/24]
$\text{C}_{15}\text{H}_{16}\text{N}_4\text{O}_2$	3-methyl-3'-nitro-4-N,N-dimethylaminoazobenzene	101.7±1.7	(381)	ME	[4313-14-8]
(368–393)	98.7±2.5	(379)	TE		[67/7]
$\text{C}_{15}\text{H}_{16}\text{N}_4\text{O}_2$	3-methyl-4'-nitro-4-N,N-dimethylaminoazobenzene	125.5±1.3	(381)	TE	[67/7][87/4]
(369–392)	126.4±3.8	(381)	ME		[67/7]
$\text{C}_{15}\text{H}_{16}\text{O}_2$	dimethoxydiphenylmethane	103.9±1.7	(298)		[2235-01-0]
$\text{C}_{15}\text{H}_{17}\text{NO}_2$	N-(2-hydroxy-3-phenoxypropyl)phenylamine	99.9	(328)		[98/26]
(323–333)					[16112-55-3]
					[87/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}$ /kJ mol <sup>-1</sup>	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		113.8±2.1			[76/19]
C <sub>15</sub> H <sub>18</sub> N <sub>2</sub>	4-isopropylaminodiphenylamine (323–348)	120.7	(335)	GS	[101-72-4] [71/19]
C <sub>15</sub> H <sub>21</sub> NO	2-methyl-1-phenyl-2-N-piperidinyl-1-propanone	94.8±1.3		B	[13430-30-3] [94/11]
C <sub>15</sub> H <sub>22</sub>	1-methyldiamantane (310–333)	80.7±0.4	(321)	TSGC	[26460-76-4] [75/2]
C <sub>15</sub> H <sub>22</sub>	3-methyldiamantane (305–327)	103.1±1.0	(316)	TSGC	[38375-86-2] [75/2]
C <sub>15</sub> H <sub>22</sub>	4-methyldiamantane (310–333)	79.4±1.25	(321)	TSGC	[30545-18-9] [75/2]
C <sub>15</sub> H <sub>22</sub> O <sub>2</sub>	3,5-di- <i>tert</i> -butylbenzoic acid (339–357)	108.4±4.2	(348)	ME	[16225-26-6] [74/15][87/4] [77/1]
C <sub>15</sub> H <sub>24</sub>	1,3-di- <i>tert</i> -butyl-5-methylbenzene (275–301)	82.4±0.5	(288)	T	[15181-11-0] [98/14]
		81.8±0.5	(298)		[98/14]
C <sub>15</sub> H <sub>24</sub> O	2,6-di- <i>tert</i> -butyl-4-methylphenol (303–343)	91.9±3.2	(298)	C	[128-37-0] [01/17]
		86.8±0.8	(319)	GS	[99/17]
		88.0±0.8	(298)	GS	[99/17]
		87.8	(318)	GS	[87/4][71/19]
		U117.3	(298)	C	[71/24][99/17]
C <sub>15</sub> H <sub>28</sub> O	cyclopentadecanone (296–315)	86.0±0.6	(305)	ME	[502-72-7] [97/13]
		77.4			[38/1][60/1] [70/1]
C <sub>15</sub> H <sub>28</sub> O <sub>2</sub>	pentadecanolide (290–310)	81.3	(300)	ME	[32539-85-8] [87/4][60/1] [54/4]
C <sub>15</sub> H <sub>30</sub>	cyclopentadecane	74.6±0.4			[295-48-7] [57/1][70/1]
C <sub>15</sub> H <sub>30</sub> O	2-pentadecanone	139.3±1.6	(298)	C	[2345-28-0] [79/8]
C <sub>15</sub> H <sub>30</sub> O <sub>2</sub>	methyl tetradecanoate	137.7±2.1	(281)	ME	[124-10-7] [65/6]
C <sub>15</sub> H <sub>30</sub> O <sub>2</sub>	pentadecanoic acid (283–305)	178		TPTD	[1002-84-2] [01/15]
C <sub>15</sub> H <sub>31</sub> NO	N-methyl tetradecanamide (332–347)	130.4±0.8	(340)	GS	[7438-09-7] [59/4][87/4]
C <sub>15</sub> H <sub>32</sub>	<i>n</i> -pentadecane	107.8	(298)	B	[629-62-9] [72/1]
C <sub>16</sub> F <sub>34</sub>	<i>n</i> -perfluorohexadecane (288–303)	104.6	(295)	ME	[355-49-7] [51/9][87/4]
C <sub>16</sub> H <sub>6</sub> Br <sub>4</sub> N <sub>2</sub> O <sub>2</sub>	5,7-dibromo-2-(5,7-dibromo-1,3-dihydro-3-oxo-2 <i>H</i> -indol-2-ylidene)-1,2-dihydro-3 <i>H</i> -indol-3-one (C.I. Vat Blue 5) (519–634)	129	(577)	GS	[2475-31-2] [86/14]
C <sub>16</sub> H <sub>9</sub> BrN <sub>2</sub> O <sub>2</sub>	5-bromo-2-(1,3-dihydro-3-oxo-2 <i>H</i> -indol-2-ylidene)-1,2-dihydro-3 <i>H</i> -indol-3-one (C.I. Vat Blue 3) (519–634)	57	(577)	GS	[6492-73-5] [86/14]
C <sub>16</sub> H <sub>10</sub>	fluoranthene (313–453)	98.3	(383)	GS	[206-44-0] [95/7]
	(283–323)	84.6±0.9	(303)	GS	[83/11]
		99.2±0.8	(298)	C	[72/1][77/1]
	(328–353)	102.1±2	(340)	ME	[65/3][70/1]
	(298–358)	102.6	(328)		[58/1]
C <sub>16</sub> H <sub>10</sub>	pyrene (308–398)	103.1±6.5	(353)	ME	[129-00-0] [98/3]
	(313–453)	97.9	(383)	GS	[95/7]
	(369–383)	100.3±0.3	(353)	PG	[88/26]
	(283–323)	91.2±0.5	(303)	GS	[83/11]
	(398–423)	100.2±0.4	(410)	IPM	[80/26]
		101.0±0.5		C	[74/4]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(348–419)	100.8±1.5		ME	[74/4]
		95.7		ME	[53/1][77/1]
					[70/1]
	(298–363)	100.5	(330)	ME	[58/1]
	(345–358)	100.1±1.7	(351)	ME	[52/3]
$\text{C}_{16}\text{H}_{10}\text{O}$	1-hydroxypyrene				[5315-79-7]
	(369–394)	129.0±3.2	(382)	ME	[98/3]
$\text{C}_{16}\text{H}_{10}\text{N}_2\text{O}_2$	2-(1,3-dihydro-3-oxo-2 <i>H</i> -indol-2-ylidene)-1,2-dihydro-3 <i>H</i> -indol-3-one (C.I. Vat Blue 1)				[482-89-3]
	(519–634)	136	(577)	GS	[86/14]
$\text{C}_{16}\text{H}_{10}\text{O}$	2,3,5,6-dibenzoxalene (benz[b]indenol[1,2-e]pyran)				[243-24-3]
	(375–388)	125.9	(381.5)		[87/4]
		129.4±1.3			[66/3][70/1]
$\text{C}_{16}\text{H}_{10}\text{S}$	1,2-benzodiphenylene sulfide				[239-35-0]
	(325–373)	111.9±1.2	(349)	ME	[98/3]
$\text{C}_{16}\text{H}_{12}\text{N}_2\text{O}$	2-hydroxy-1-phenylazonaphthalene				[842-07-9]
	(350–374)	116.7±5.4	(362)		[84/35]
$\text{C}_{16}\text{H}_{12}\text{O}$	2,5-diphenylfuran				[955-83-9]
		102	(340)		[89/7]
$\text{C}_{16}\text{H}_{12}\text{S}_2$	3,6-diphenyl-1,2-dithiin				[16212-85-4]
		174.5±2.5	(355)		[73/23][77/1]
		183.1±2.5	(298)		[73/23][77/1]
$\text{C}_{16}\text{H}_{13}\text{N}$	N-phenyl-1-naphthylamine				[90-30-2]
	(313–333)	96.5	(323)	GS	[87/4][71/19]
$\text{C}_{16}\text{H}_{13}\text{N}$	N-phenyl-2-naphthylamine				[135-88-6]
	(333–363)	115.8	(348)	GS	[87/4][71/19]
$\text{C}_{16}\text{H}_{13}\text{NO}$	9-acetamidoanthracene				[37170-96-0]
	(446–500)	134.8	(461)	RG	[58/4][87/4]
$\text{C}_{16}\text{H}_{13}\text{NO}$	N-(4-hydroxyphenyl)-2-naphthylamine				[93-45-8]
	(373–408)	126.8	(390)	GS	[71/19]
$\text{C}_{16}\text{H}_{13}\text{NO}_2$	1-(dimethylamino)-9,10-anthraquinone				[5960-55-4]
	(396–408)	U 3.6	(402)		[87/4]
$\text{C}_{16}\text{H}_{13}\text{NO}_3$	1-(2-hydroxyethylamino)-9,10-anthraquinone				[4465-58-1]
	(403–417)	152.7±3.8	(410)	ME	[60/8][66/18]
$\text{C}_{16}\text{H}_{13}\text{NO}_5$	1-amino-2-hydroxyethyl-4-hydroxy-9,10-anthraquinone				
		135.2			[84/40]
$\text{C}_{16}\text{H}_{14}$	9,10-dimethylanthracene				[781-43-1]
	(372–382)	114.6	(377)		[87/4]
	(381–434)	103.2	(396)	RG	[58/4][87/4]
$\text{C}_{16}\text{H}_{14}$	2,7-dimethylphenanthrene				[1576-69-8]
		106.7±0.8		ME	[65/5][70/1]
$\text{C}_{16}\text{H}_{14}$	4,5-dimethylphenanthrene				[3674-69-9]
	(313–453)	85.7	(383)	GS	[95/7]
		104.6±1.3		ME	[65/5][70/1]
$\text{C}_{16}\text{H}_{14}$	9,10-dimethylphenanthrene				[604-83-1]
		119.5±1.3			[66/3][70/1]
$\text{C}_{16}\text{H}_{14}$	1-phenylnaphthalene				[605-02-7]
	(313–453)	88.6	(383)	GS	[95/7]
$\text{C}_{16}\text{H}_{14}$	1,4-diphenylbutadiene				[866-65-7]
		87.0		RG	[58/4]
$\text{C}_{16}\text{H}_{14}$	4,5,9,10-tetrahydropyrene				[781-17-9]
	(385–410)	90.4	(400)	IPM	[93/7]
$\text{C}_{16}\text{H}_{14}\text{Cl}_2\text{O}_2$	1,1-dichloro-2,2-bis-(4-methoxyphenyl)ethylene				[4359-34-6]
		79.2			[95/32][89/32]
$\text{C}_{16}\text{H}_{14}\text{F}_4\text{N}_4\text{O}_2$	N-methyl-N-(2,2,3,3-tetrafluoropropyl)-4-[(4-nitrophenyl)azobzenenamine				[80135-84-8]
		100.8		UV	[84/39]
$\text{C}_{16}\text{H}_{14}\text{N}_2\text{O}_2$	1,4-bis(N-methylamino)antra-9,10-quinone				[2475-44-7]
	(385–413)	151.8±3.9	(399)		[84/35]
		150.2		GS	[67/16][91/18]
$\text{C}_{16}\text{H}_{15}\text{NO}$	3-anilino-1-phenylbut-2-enone				[18594-93-9]
		126.8±3.0	(298)	C	[93/24]
$\text{C}_{16}\text{H}_{16}$	[2.2]-para-cyclophane				[1633-22-3]
	(353–409)	96.4±1.5		TSGC	[80/15]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{16}\text{H}_{16}$	[2.2]-meta-cyclophane (308–332)	96.3±4.2 92.9±0.84	(363) (320)	ME	[73/13][77/1] [66/11][87/4] [70/1]
		91.6±1.7			[2319-97-3] [69/6][77/1] [87/4]
$\text{C}_{16}\text{H}_{16}$	[2.2]-meta-para-cyclophane (311–328)	92.0±2	(298) (336)	ME	[69/6][77/1] [5385-36-4] [69/6][77/1] [87/4]
		86.6			[69/6][77/1] [2919-20-2] [99/19]
$\text{C}_{16}\text{H}_{16}$	1,1-bis-(4-methylphenyl)ethane	87.5±0.9	(298)	ME	[69/6][77/1] [1732-13-4]
		101.0±1.4			[93/7]
$\text{C}_{16}\text{H}_{16}$	1,2,3,6,7,8-hexahydropyrene (390–405)	92.3	(398)	IPM	[7074-00-2]
		43.1±4.2			[71/11][77/1] [3327-06-8]
$\text{C}_{16}\text{H}_{16}\text{O}_{10}$	pentamethoxycarbonylbenzene (389–413)	160.0±0.8	(401)	ME	[95/6]
		165.1±0.8			[67/8][95/6]
$\text{C}_{16}\text{H}_{17}\text{ClN}_4\text{O}_3$	4-(N-ethyl-N-2-hydroxyethylamino)-4'-nitro-2'-chloroazobenzene 142.7		(298)	ME	[3180-81-2] [68/10][88/24]
		102.2±1.1			[193472-70-7] [97/34]
$\text{C}_{16}\text{H}_{17}\text{NO}$	1,2-diphenyl-2-N,N-dimethylamino-1-ethanone 140.1±1.9		(298)	B	[15582-77-5] [94/11]
		127.2±1.7			[99081-88-6] [86/10]
$\text{C}_{16}\text{H}_{18}$	(dl) 1,3-diphenylbutane (288–303)	73.6	(296)	ME	[1520-44-1] [74/6][87/4]
		96.7			[5789-35-5] [84/16]
$\text{C}_{16}\text{H}_{18}\text{NO}_5$	bis(2,4-dimethoxyphenyl)nitrogen oxide (333–363)	144.1±11.4	(348)	ME	[3788-15-6] [87/4][65/7]
		126.2±2.7			[4792-83-0] [93/11]
$\text{C}_{16}\text{H}_{18}\text{N}_2\text{O}_2$	2,2',6,6'-tetramethylazobenzene-N,N-dioxide 107±12		(298)	ME	[101225-69-8] [93/3]
		146.0			[3025-52-3] [87/19][91/18]
$\text{C}_{16}\text{H}_{18}\text{N}_4\text{O}_2$	4-(N,N-diethylamino)-4'-nitroazobenzene (422–441)	151.5±4.2	(431)	ME	[60/8] [2872-52-8]
		136.8			[84/39][84/40] [68/10][88/24]
$\text{C}_{16}\text{H}_{18}\text{N}_4\text{O}_3$	4-(N-ethyl-N-2-hydroxyethylamino)-4'-nitroazobenzene (420–433)	189.5	(426)	ME	[60/8][66/18] [2481-94-9]
		176.6±1.3			[87/19][91/18] [84/35]
$\text{C}_{16}\text{H}_{19}\text{N}_3$	4-(N,N-diethylamino)azobenzene (330–353)	106.4	(342)	UV	[84/39] [84/40]
		103.4			[199394-72-4] [97/18]
$\text{C}_{16}\text{H}_{23}\text{N}$	N-cyclohexyl-(2,4,6-trimethyl)benzaldehyde imine 104.9±0.8		(298)	B	[00/28]
		132.2			[63/13] [283-68-1]
$\text{C}_{16}\text{H}_{24}\text{N}_2\text{O}_2$	N-benzoyl-N',N'-diisobutylurea	137.5±4.4	(298)	C	[69/6][77/1] [87/4]
		113.0			[69/6][77/1] [19219-01-3]
$\text{C}_{16}\text{H}_{26}\text{O}$	2,4,5-triisopropylbenzyl alcohol (313–346)	85.2±1.3	(327)	ME	[84/22] [2550-52-8]
		91.6±2.1			[69/6][77/1] [19219-01-3]
$\text{C}_{16}\text{H}_{30}\text{N}_2$	tetracyclopropylsuccinonitrile (316–338)	110.2±1.5	(298)	ME	[84/22] [2550-52-8]
		cyclohexadecanone			

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		82			[38/1][60/1]
C <sub>16</sub> H <sub>30</sub> O <sub>4</sub>	hexadecanedioic acid (377–398)	151.0±3.3 155.4±3.3	(388) (298)	ME	[505-54-4] [60/4][87/4] [60/4][99/10]
C <sub>16</sub> H <sub>32</sub>	cyclohexadecane	81.8±0.4			[295-65-8] [57/1][70/1]
C <sub>16</sub> H <sub>32</sub> O <sub>2</sub>	hexadecanoic acid (palmitic acid) (294–316) (320–333)	154 154.4±4.2	(326)	TPTD ME	[57-10-3] [01/15] [61/1][70/1] [87/4]
C <sub>16</sub> H <sub>33</sub> NO	hexadecanamide (364–378)	181.6±1.3	(371)	ME	[629-54-9] [59/3][87/4]
C <sub>16</sub> H <sub>34</sub>	hexadecane (288–290)	135.1 134.9 83.4±8	(298) (291)	B B ME	[544-76-3] [72/1] [63/6] [49/1]
C <sub>16</sub> H <sub>34</sub> O	1-hexadecanol (323–335) (308–320)	109.4 (liq) 167.4±2.1 169.5±2.1	(329) (314) (298)	ME	[36653-82-4] [87/4] [65/6][87/4] [65/6]
C <sub>17</sub> H <sub>10</sub> O	benzanthrone (389–409)	121.6±0.6 126.6±0.6 129.7±2.1 (353–388) 119.7±5.4 124.6±6.0 114.2±0.8 115.5	(399) (298) (298) (370) (298) (398)	ME QR ME QR	[82-05-3] [99/11] [99/11] [99/24] [84/12] [84/12] [79/28] [52/3][60/1]
C <sub>17</sub> H <sub>12</sub>	benzo[a]fluorene (313–453)	105.4	(383)	GS	[238-84-6] [95/7]
C <sub>17</sub> H <sub>12</sub>	benzo[b]fluorene (344–398) (313–453)	119.3±1.3 111.2	(371) (383)	ME GS	[243-17-4] [98/3] [95/7]
C <sub>17</sub> H <sub>13</sub> N	N-methyl-2,3,5,6-dibenzazalene	131.8±1.3			[6626-64-8] [66/3][70/1]
C <sub>17</sub> H <sub>14</sub> N <sub>2</sub> O <sub>2</sub>	1-[2-(methoxyphenyl)azo]-2-hydroxynaphthalene (374–388)	142.4±2.2	(381)		[1229-55-6] [84/35]
C <sub>17</sub> H <sub>16</sub> F <sub>4</sub> N <sub>4</sub> O <sub>2</sub>	N-ethyl-N-(2,2,3,3-tetrafluoropropyl)-4-[4-nitrophenyl]azo- benzenamine	103.0 2-[[4-[(4-nitrophenyl)azo]phenyl][2,2,3,3-tetrafluoropropyl]amino]-ethanol 103.0		UV	[91488-84-5] [84/39] [1543-74-4]
C <sub>17</sub> H <sub>16</sub> F <sub>4</sub> N <sub>4</sub> O <sub>3</sub>	tetrahydro-2,6-diphenyl-4 <i>H</i> -thiopyran-4-one (348–388)	136.0 144±3	(375) (298)	ME ME	[37014-01-0] [72/15] [72/15][77/1]
C <sub>17</sub> H <sub>16</sub> O <sub>4</sub>	diphenylmethylene diacetate (348–388)	122.1±1.2	(368)	GS	[54334-63-3] [96/14]
C <sub>17</sub> H <sub>17</sub> N <sub>5</sub> O <sub>2</sub>	4-nitro-4'-(N-2-cyanoethyl-N-ethylamino)azobenzene	147.3			[84/40]
C <sub>17</sub> H <sub>18</sub> O <sub>3</sub>	4-( <i>tert</i> -butylphenyl)salicylate (293–336)	137.4	(308)	UV	[87-18-3] [87/4][60/24]
C <sub>17</sub> H <sub>18</sub> O <sub>4</sub>	2-hydroxy-4,4'-diethoxybenzophenone	134.9	(298)	B	[101595-31-7] [99/22]
C <sub>17</sub> H <sub>20</sub> O <sub>2</sub>	diethoxydiphenylmethane	97.1±1.1	(298)		[6397-77-9] [98/26]
C <sub>17</sub> H <sub>21</sub> NO <sub>4</sub>	cocaine	127.2		GS	[50-36-2] [96/19]
C <sub>17</sub> H <sub>32</sub> O	(294–314) cycloheptadecanone	112.3±2.8 75.7	(304)	GS	[84/27] [3661-77-6] [38/1][60/1] [70/1]
C <sub>17</sub> H <sub>34</sub>	cycloheptadecane	66.1±0.6			[295-97-6] [57/1][70/1]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )		CAS registry number
Polymorph	Temperature range (K)			Method	Reference
$\text{C}_{17}\text{H}_{34}\text{O}_2$	methyl hexadecanoate (291–301)	$152.3 \pm 2$	(296)	ME	[112-39-0] [65/6][87/4]
$\text{C}_{17}\text{H}_{34}\text{O}_2$	heptadecanoic acid (margaric acid) (291–316)	168		TPTD	[506-12-7] [01/15]
$\text{C}_{17}\text{H}_{35}\text{NO}$	N-methyl hexadecanamide (345–355)	$144.5 \pm 0.8$	(350)	GS	[7388-58-1] [59/4][87/4]
$\text{C}_{17}\text{H}_{36}$	heptadecane (288–293)	125.1 $131.3 \pm 13$	(298) (290)	ME	[629-78-7] [72/1] [49/1][60/1]
$\text{C}_{17}\text{H}_{36}\text{O}$	1-heptadecanol	$169.5 \pm 2.2$			[1454-85-9] [65/6][70/1]
$\text{C}_{18}\text{H}_{10}$	benzo[3,4]cyclobuta[1,2-a]biphenylene ([3]phenylene)	$115.1 \pm 0.8$			[65513-20-4] [00/18]
$\text{C}_{18}\text{H}_{10}\text{BrNO}_3$	2(4-bromo-3-hydroxy-2-quinolinyl)-1 <i>H</i> -indene-1,3(2 <i>H</i> )-dione (C. I. Disperse Yellow 64)	130.6	(498)		[10319-14-9] [87/4]
$\text{C}_{18}\text{H}_{10}\text{Cl}_2\text{O}_2\text{S}_2$	6-chloro-2-(6-chloro-4-methyl-3-oxobenzof[b]thien-2(3 <i>H</i> )-ylidine)- 4-methyl-benzo[b]thiophen-3(2 <i>H</i> )-one (C.I. Vat Red 1)				[2379-74-0]
$\text{C}_{18}\text{H}_{10}\text{Cl}_2\text{O}_2\text{S}_2$	(519–634)	148	(577)	GS	[86/14] [5462-29-3]
$\text{C}_{18}\text{H}_{10}\text{O}_2$	5-chloro-2-(5-chloro-7-methyl-3-oxobenzof[b]thien-2(3 <i>H</i> )-ylidine)- 7-methyl-benzo[b]thiophen-3(2 <i>H</i> )-one (C.I. Vat Violet 2)	93	(577)	GS	[86/14] [2498-66-0]
$\text{C}_{18}\text{H}_{10}\text{O}_2$	1,2-benzanthra-9,10-quinone	$82.8 \pm 4.0$			[56/5][70/1]
$\text{C}_{18}\text{H}_{10}\text{O}_2$	5,12-tetracenequinone	$108.8 \pm 5.0$			[1090-13-7] [56/5][70/1]
$\text{C}_{18}\text{H}_{10}\text{O}_4$	6,11-dihydroxy-5,12-naphthacenedione (426–446)	$144.2 \pm 1.4$	(436)	ME	[98/3] [1785-52-0]
$\text{C}_{18}\text{H}_{11}\text{NO}_3$	2-(3-hydroxy-2-quinolinylidene)-indeno-1,3-dione (Disperse Yellow 54)	$125.2 \pm 0.4$		LE	[7576-65-0] [98/38]
$\text{C}_{18}\text{H}_{12}$	(483–513)	139	(498)		[73/6]
$\text{C}_{18}\text{H}_{12}$	benz[a]anthracene (1,2-benzanthracene, tetraphene)				[56-55-3]
$\text{C}_{18}\text{H}_{12}$	(313–453)	115.5	(383)	GS	[95/7]
$\text{C}_{18}\text{H}_{12}$	(330–390)	113.4	(345)	ME	[87/4][74/30]
$\text{C}_{18}\text{H}_{12}$		104±2	(351)	TE	[83/27]
$\text{C}_{18}\text{H}_{12}$	(283–323)	U $81.3 \pm 2.5$	(303)	GS	[83/11]
$\text{C}_{18}\text{H}_{12}$	(373–396)	123.3±3	(298)		[80/1]
$\text{C}_{18}\text{H}_{12}$	(357–454)	120.5	(405)	ME	[67/2]
$\text{C}_{18}\text{H}_{12}$	(377–403)	$104.6 \pm 4.2$	(390)	ME	[64/3][87/4]
$\text{C}_{18}\text{H}_{12}$	(333–393)	119.7	(363)		[58/1]
$\text{C}_{18}\text{H}_{12}$		U 109.2			[51/2][60/1]
$\text{C}_{18}\text{H}_{12}$	triphenylene				[217-59-4]
$\text{C}_{18}\text{H}_{12}$	(313–453)	114.5	(383)	GS	[95/7]
$\text{C}_{18}\text{H}_{12}$	(381–406)	$126.5 \pm 4$	(298)	TE,ME	[80/1]
$\text{C}_{18}\text{H}_{12}$	(363–468)	107.6	(378)		[87/4]
$\text{C}_{18}\text{H}_{12}$	(338–398)	$118 \pm 4$	(368)		[58/1][70/1]
$\text{C}_{18}\text{H}_{12}$		107.1	(425)	ME	[67/2]
$\text{C}_{18}\text{H}_{12}$	naphthacene (tetracene)				[92-24-0]
$\text{C}_{18}\text{H}_{12}$	(386–472)	$126.1 \pm 9.0$	(429)	ME	[98/3]
$\text{C}_{18}\text{H}_{12}$	(313–453)	126.5	(383)	GS	[95/7]
$\text{C}_{18}\text{H}_{12}$	(419–446)	$143.7 \pm 0.5$	(298)	TE,M	[80/1]
$\text{C}_{18}\text{H}_{12}$		124.7±4	(422)	ME	[67/2][77/1]
$\text{C}_{18}\text{H}_{12}$	(433–493)	128.8	(473)	HSA	[70/1] [65/15]
$\text{C}_{18}\text{H}_{12}$	(433–483)	132.6	(468)	HSA	[64/10]
$\text{C}_{18}\text{H}_{12}$		117.2	(459)	ME	[52/3][60/1]
$\text{C}_{18}\text{H}_{12}$		U92.0	(384)	ME	[51/12]
$\text{C}_{18}\text{H}_{12}$		124.3			[51/2][60/1]
$\text{C}_{18}\text{H}_{12}$	benzo[c]phenanthrene (3,4-benzophenanthrene)	$106.3 \pm 4.2$			[195-19-7] [51/2][70/1] [67/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{18}\text{H}_{12}$	chrysene				[218-01-9]
	(313–453)	118.8	(383)	GS	[95/7]
		131±4	(298)	TE,ME	[80/1]
		117.6±4	(400)	ME	[67/2][70/1]
	(353–418)	121.4	(385)		[58/1]
		117.6			[51/2][60/1]
$\text{C}_{18}\text{H}_{12}\text{N}_2$	2,2'-biquinoline				[119-91-5]
	(393–411)	129.5±0.8	(402)	ME	[97/14]
		134.7±1.3	(298)		[97/14]
		96.6±0.9			[85/6]
$\text{C}_{18}\text{H}_{12}\text{O}$	2-phenylindeno[2,1-b]pyran				[10435-67-3]
	(394–424)	132.8	(409)		[87/4][66/3]
$\text{C}_{18}\text{H}_{14}$	5,12-dihydrotetracene				[959-02-4]
	(338–398)	115.9±4	(368)		[58/1][70/1]
		120.5			[51/2][60/1]
$\text{C}_{18}\text{H}_{14}$	diphenylfulvene			E	[2175-90-8]
		104.6±8.3			[57/2][70/1]
$\text{C}_{18}\text{H}_{14}$	<i>o</i> -terphenyl			B	[84-15-1]
		101.2±0.5	(298)	B	[97/15]
		97±1	(298)	B	[71/8]
$\text{C}_{18}\text{H}_{14}$	<i>m</i> -terphenyl				[92-06-8]
	(329–353)	115.5±1.6	(341)	T	[97/15]
		118.1±1.6	(298)		[97/15]
		120±1	(298)		[71/8]
	(313–363)	119	(338)		[58/1]
$\text{C}_{18}\text{H}_{14}$	<i>p</i> -terphenyl				[92-94-4]
	(353–383)	116.2±2.4	(368)	T	[97/15]
		120.4±2.4	(298)		[97/15]
		113±2	(298)	B	[71/8]
		118.4	(397)	ME	[67/2]
	(333–393)	120.6	(363)		[58/1]
$\text{C}_{18}\text{H}_{14}\text{O}$	2,6-diphenylphenol				[92-69-3]
	(334–363)	116.1±1.1	(348)	T	[98/9]
		119.1±1.1	(298)		[98/9]
$\text{C}_{18}\text{H}_{15}\text{N}$	triphenylamine				[603-34-9]
	(322–373)	87.9±1.3	(337)		[78/2][87/4]
$\text{C}_{18}\text{H}_{15}\text{NO}_2$	9-diacetylaminooanthracene				[3808-37-5]
		106.4		RG	[58/4]
$\text{C}_{18}\text{H}_{15}\text{OP}$	triphenylphosphine oxide				[791-28-6]
	(385–408)	131±2	(399)	ME,TE	[89/28]
		66±6	(298)	B	[78/11]
$\text{C}_{18}\text{H}_{15}\text{P}$	triphenylphosphine				[603-35-0]
		113.2±3.0	(298)		[88/21]
		109.2±1.1	(350)		[84/13]
		96.2±8.4	(298)		[82/20][60/9]
$\text{C}_{18}\text{H}_{15}\text{PO}_4$	triphenyl phosphate				[115-86-6]
		114.4±2.6	(298)	B	[89/23]
$\text{C}_{18}\text{H}_{15}\text{PS}$	triphenylphosphine sulfide				[3878-45-3]
	(388–419)	136.8±6.1	(403)	HSA	[96/9]
		142.8±6.8	(298)		[96/9]
$\text{C}_{18}\text{H}_{16}\text{N}_4$	dihydrodibenzotetra-aza-annulene				[22119-35-3]
	(443–583)	81.5±6.4	(513)	T	[83/29]
$\text{C}_{18}\text{H}_{18}$	2,4,5,7-tetramethylphenanthrene				[7396-38-5]
		114.2±1.7		ME	[65/5][70/1]
$\text{C}_{18}\text{H}_{18}$	3,4,5,6-tetramethylphenanthrene				[7343-06-8]
		133.5±3.8		ME	[65/5][70/1]
$\text{C}_{18}\text{H}_{18}$	9-butylanthracene				[1498-69-7]
	(293–313)	108.1	(303)		[87/4][64/15]
$\text{C}_{18}\text{H}_{18}\text{O}_2$	3-diphenylmethyl-2,4-pentanedione				[19672-37-8]
	(348–383)	112.8±0.4	(366)	T	[95/2]
$\text{C}_{18}\text{H}_{18}\text{O}_4$	2,2'-diphenyl-bi-(1,3-dioxolan-2-yl)				[25062-95-7]
	(320–362)	132.8±2.1	(341)	T	[95/13]
$\text{C}_{18}\text{H}_{18}\text{O}_{12}$	hexamethoxycarbonylbenzene				[6237-59-8]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m / \text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{18}\text{H}_{20}$	(403–422)	140.7±1.1	(413)	ME	[95/6]
		154.3±1.2	(298)		[95/6]
$\text{C}_{18}\text{H}_{20}\text{O}_4$	[3.3]para-cyclophane				[2913-24-8]
	(322–343)	97.8±0.8	(332)	ME	[69/6][77/1] [87/4]
$\text{C}_{18}\text{H}_{21}\text{N}$	(322–343)	103.3±1.0	(298)	ME	[69/6][77/1]
	2-hydroxy-4-butoxy-4'-methoxybenzophenone	126.3		B	[39716-92-2] [99/22]
$\text{C}_{18}\text{H}_{22}$	N-benzyl-pivalophenone imine	109.7±3.3	(298)	B	[97/18]
	2,3-dimethyl-2,3-diphenylbutane				[1889-67-4]
$\text{C}_{18}\text{H}_{22}\text{N}_2\text{O}_2$	(293–348)	96.7±0.8	(320)		[83/16]
	2,2',4,4',6,6'-hexamethylazobenzene-N,N-dioxide	107±12	(298)	ME	[100046-00-2] [93/3]
$\text{C}_{18}\text{H}_{22}\text{N}_4$	2,3-dimethyl-2,3-bis(phenylazo)butane	113.8±1.8		B	[133930-64-0] [93/14]
	(dl)-2,3-dimethoxy-2,3-diphenylbutane	114.2±6.3	(339)		[41047-48-7] [90/17]
$\text{C}_{18}\text{H}_{22}\text{O}_4$	1,2-diphenyl-1,1,2,2-tetramethoxyethane	77.6±0.6	(375)	T	[39787-30-9] [95/13]
	(351–399)				[1610-22-6]
$\text{C}_{18}\text{H}_{24}$	1,2,3,4,4a,7,8,9,10,11,12,12a-dodecahydrochrysene	115.4	(303)		[87/4][64/15]
	(293–313)				[24973-59-9]
$\text{C}_{18}\text{H}_{29}\text{NO}$	2,4,6-tri- <i>tert</i> -butylnitrosobenzene	91.0±3.2	(298)	C	[95/20]
	2,4,6-tri- <i>tert</i> -butylnitrosobenzene	94.8±1.0	(351)	GS	[4074-25-3] [00/25]
$\text{C}_{18}\text{H}_{29}\text{NO}_2$		96.4±1.0	(298)	GS	[00/25]
		81.4±1.8	(298)	C	[95/20]
$\text{C}_{18}\text{H}_{30}$	1,3,5-tri- <i>tert</i> -butylbenzene				[1460-02-2]
	(298–341)	79.9±0.3	(319)	T	[98/14]
$\text{C}_{18}\text{H}_{30}$		81.2±0.3	(298)		[98/14]
	(273–315)	79.7±0.4	(294)	ME	[65/6][87/4] [604-88-6]
$\text{C}_{18}\text{H}_{30}$	hexaethylbenzene	95.0±4.0	(340)	HSA	[86/1]
	(327–352)	U 41.3±0.9		DSC	[84/2]
$\text{C}_{18}\text{H}_{30}$	perhydrochrysene				[2090-14-4]
	(273–353)	82.3 (liq)	(288)		[87/4][64/15]
$\text{C}_{18}\text{H}_{30}$	1-phenyldodecane	135.1	(298)		[123-01-3] [00/10]
$\text{C}_{18}\text{H}_{30}\text{O}$	2,4,6-tri- <i>tert</i> -butylphenol	87.5±0.4	(298)	GS	[732-26-3] [99/17]
	(295–339)	85.6±0.4	(317)	ME	[65/6][87/4]
$\text{C}_{18}\text{H}_{30}\text{O}$	(415–551)	63.2 (liq)	(430)		[87/4]
		U128.1	(298)	C	[71/24][99/17]
$\text{C}_{18}\text{H}_{30}\text{O}_4$	(292–313)	83.9	(302)		[60/14]
		84.2±0.5	(298)	V	[60/14][99/17]
$\text{C}_{18}\text{H}_{31}\text{N}$	4-diacetylbenzene diethyl ketal				[47189-08-2]
	(306–327)	112.5	(316.5)		[78/9][87/4]
$\text{C}_{18}\text{H}_{31}\text{N}$	2,4,6-tri- <i>tert</i> -butylaniline	92.5±1.1	(298)	GS	[961-38-6] [00/6]
$\text{C}_{18}\text{H}_{34}\text{O}$	cyclooctadecanone	77.4			[6907-37-5] [38/1][60/1]
$\text{C}_{18}\text{H}_{36}\text{O}_2$	octadecanoic acid (stearic acid)				[57-11-4]
	(296–319)	158		TPTD	[01/15]
$\text{C}_{18}\text{H}_{36}\text{O}_2$	(331–340)	166.5±4.2	(336)	ME	[61/1][70/1] [628-97-7]
	ethyl palmitate	150.8	(290)	ME	[87/4][67/18]
$\text{C}_{18}\text{H}_{37}\text{NO}$	octadecanamide				[124-26-5]
	(367–379)	195.8±4.2	(373)	ME	[59/3][87/4]
$\text{C}_{18}\text{H}_{38}$	1,1,2,2-tetra- <i>tert</i> -butylethane	71.9	(341)		[62850-21-9] [84/15]
	(303–366)	74.3	(298)		[84/15]
$\text{C}_{18}\text{H}_{38}$	<i>n</i> -octadecane				[593-45-3]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
		152.7	(298)	C	[72/1]
	(288–298)	153.0±5	(293)	ME	[49/1][60/1] [70/1]
$\text{C}_{18}\text{H}_{38}\text{O}$	1-octadecanol				[112-92-5]
	(318–329)	187.4±1.3	(324)	ME	[65/6][87/4]
		191.2±1.3	(298)		[65/6]
$\text{C}_{19}\text{H}_{15}\text{N}$	N-phenyl benzophenone imine				[574-45-8]
	(348–387)	115.5±1.8	(367)	T	[97/18]
		119.7±1.8	(298)		[97/18]
$\text{C}_{19}\text{H}_{15}\text{N}_3$	triphenylazidomethane				[14309-25-2]
	(335–363)	120.6	(349)		[87/4][74/31]
$\text{C}_{19}\text{H}_{16}$	triphenylmethane				[519-73-3]
		109.1	(298)	GS	[99/25]
		112.0	(298)	CGC-DSC	[98/5]
	(343–363)	113.9	(353)	EM	[89/1]
	(303–358)	106.8	(330)	GS	[86/8]
	(325–349)	100±0.4	(339)	V	[59/2][70/1]
		100.7	(298)		[86/17][36/2]
		105±0.8			[74/31]
$\text{C}_{19}\text{H}_{16}\text{F}_8\text{N}_4\text{O}_2$	N-ethyl-4-[(4-nitrophenyl)azo]-N-(2,2,3,3,4,4,5,5-octafluoropentyl)-benzenamine				[91488-85-6]
		112.6		UV	[84/39]
$\text{C}_{19}\text{H}_{16}\text{O}$	triphenylmethanol				[76-84-6]
		121.8±1.7	(298)	GS	[98/22]
	(353–373)	122	(363)		[87/4]
$\text{C}_{19}\text{H}_{16}\text{O}_2$	2-fluorenyl-2-methyl-1,3-cyclopentandione				[160731-89-5]
	(353–388)	122.3±1.6	(371)	T	[95/2]
$\text{C}_{19}\text{H}_{17}\text{NO}_2$	1-piperidinoanthraquinone				[4946-83-2]
	(383–392)	U 18.3 (387.5)			[87/4]
$\text{C}_{19}\text{H}_{18}\text{O}_2$	2-diphenylmethyl-2-methyl-1,3-cyclopentandione				[160731-87-3]
	(355–393)	120.2±1.1	(374)	T	[95/2]
$\text{C}_{19}\text{H}_{20}\text{O}_2$	3-diphenylmethyl-3-methyl-2,4-pentandione				[137932-36-6]
		114.4±0.6	(298)	T,B	[95/2]
$\text{C}_{19}\text{H}_{21}\text{NO}$	(±)1,2-diphenyl-2-N-piperidinyl-1-ethanone				[127529-16-2]
		147.1±1		B	[94/11]
$\text{C}_{19}\text{H}_{34}$	tricyclohexylmethane				[1610-24-8]
	(301–321)	117.4	(311)		[87/4][64/15]
$\text{C}_{19}\text{H}_{36}\text{O}$	cyclononadecanone				
		82.4			
$\text{C}_{19}\text{H}_{38}\text{O}_2$	methyl octadecanoate				[38/1][60/1]
	(299–310)	158.2±2.5	(304)		[112-61-8]
$\text{C}_{19}\text{H}_{38}\text{O}_2$	nonadecanoic acid				[65/6][87/4]
		198.7±5			[646-30-0]
$\text{C}_{19}\text{H}_{40}$	n-nonadecane				[68/2][70/1]
		143.6	(298)	C	[629-92-5]
	(288–303)	136.6	(296)		[72/1]
$\text{C}_{20}\text{H}_{12}$	perylene				[64/15]
	(391–424)	132.6±3.6	(408)	ME	[198-55-0]
	(313–453)	123.2	(383)	GS	[98/3]
	(443–518)	145.2±2.5	(298)	C,ME	[95/7]
		125.5±4.2	(298)	ME	[73/7]
	(383–453)	139	(418)		[67/2][70/1]
		129.6±2.1	(415)	ME	[58/1][87/4]
		121.3	(370)	ME	[52/3]
$\text{C}_{20}\text{H}_{12}$	benzo[b]fluoranthene				[51/12]
	(313–453)	119.2	(383)	GS	[205-99-2]
$\text{C}_{20}\text{H}_{12}$	benzo[k]fluoranthene				[95/7]
	(363–430)	130	(378)		[207-08-9]
		120±10		TE	[87/4]
$\text{C}_{20}\text{H}_{12}$	benzo[a]pyrene				[83/28]
	(313–453)	122.5	(383)	GS	[50-32-8]
	(358–431)	118.3	(373)	ME	[95/7]
$\text{C}_{20}\text{H}_{12}$	benzo[e]pyrene				[87/4][74/30]
					[192-97-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{20}\text{H}_{12}\text{BrNO}_4$	(313–453)	117.9	(383)	GS	[95/7]
	(359–423)	119.1	(373)	ME	[87/4][74/30]
$\text{C}_{20}\text{H}_{13}\text{NO}_4$	(373–453)	163.6	(413)		[59722-76-8]
	1-amino-4-hydroxy-2-phenoxy-9,10-anthraquinone (Disperse Red 60)				[78/35]
$\text{C}_{20}\text{H}_{14}$	(359–366)	152.5	(362.5)		[17418-58-5]
		141.8			[87/4]
$\text{C}_{20}\text{H}_{14}$	(373–453)	103.8	(413)		[84/40]
	9,10-dihydro-9,10-(1',2') benzoanthracene (tryptcene)	104.6±12.6			[78/35]
$\text{C}_{20}\text{H}_{14}$	9-phenylanthracene				[477-75-8]
	(313–453)	118.7	(383)	GS	[73/13][77/1]
$\text{C}_{20}\text{H}_{14}$	(352–395)	119.7		TE	[602-55-1]
	(353–426)	115.3	(368)		[74/33]
$\text{C}_{20}\text{H}_{14}$	binaphthalene				[58/4]
	(313–453)	138.3	(383)	GS	[11068-27-2]
$\text{C}_{20}\text{H}_{14}\text{N}_2\text{O}_2$	1-anilino-4-amino-9,19-anthraquinone				[95/7]
		138.6			[4395-65-7]
$\text{C}_{20}\text{H}_{14}\text{N}_2\text{O}_4$	(373–453)	135.1	(413)	GS	[84/40]
	1-amino-2-(4-aminophenoxy)-4-hydroxy-9,10-anthraquinone	U50.2	(413)		[77/20][78/35]
$\text{C}_{20}\text{H}_{14}\text{O}_4$	(373–453)				[56405-27-7]
	resorcinol dibenzoate				[78/35]
$\text{C}_{20}\text{H}_{15}\text{F}_3$	(323–399)	165.8	(338)	UV	[94-01-9]
	1,1,1-trifluoro-2,2,2-triphenylethane	112.3±1.0	(298)		[87/4][60/24]
$\text{C}_{20}\text{H}_{16}$	1',9-dimethyl-1,2-benzanthracene	112.5±3.3		ME	[68643-31-2]
					[97/34]
$\text{C}_{20}\text{H}_{16}$	3',6-dimethyl-1,2-benzanthracene	112.5±3.3		ME	[313-74-6]
					[65/5][70/1]
$\text{C}_{20}\text{H}_{16}$	7,12-dimethylbenz[a]anthracene				[316-51-8]
	(379–390)	135			[65/5][70/1]
$\text{C}_{20}\text{H}_{16}$	(379–396)	107.8 (vap)			[57-97-6]
	5,6-dimethylchrysene				[87/4][64/3]
$\text{C}_{20}\text{H}_{16}\text{O}_4\text{S}_2$	(379–408)	130±1.3			[87/4][64/3]
	6-ethoxy-2-(6-ethoxy-3-oxobenzo[b]thien-2(3 <i>H</i> )-ylidene)benzo[b]-thiophen-3(2 <i>H</i> )-one (C.I. Vat Orange 5)	134±1.3			[87/4][64/3]
$\text{C}_{20}\text{H}_{17}\text{N}_3\text{O}_2$	(519–634)	135	(394)	ME	[3697-27-6]
	N-(benzoyl)-4-(2-hydroxy-4-methylphenylazo)benzenamine (Disperse Yellow 50)	65	(577)	GS	[66/3][70/1]
$\text{C}_{20}\text{H}_{18}$	(464–484)	69	(474)	GS	[86/14]
	1,1,1-triphenylethane	108.6	(298)		[89/29]
$\text{C}_{20}\text{H}_{18}\text{O}_6$	9-fluorenyl-tris(methoxycarbonyl)methane				[15271-39-6]
		132.6	(298)	GS	[99/25]
$\text{C}_{20}\text{H}_{20}$	pagodane (undecacyclo[9.9.0.0 <sup>1,5</sup> .0 <sup>2,12</sup> .0 <sup>2,18</sup> .0 <sup>3,7</sup> .0 <sup>6,10</sup> .0 <sup>8,12</sup> .0 <sup>11,15</sup> .0 <sup>13,17</sup> .0 <sup>16,20</sup> ]eicosane)				[170464-52-5]
	(418–473)	90.2±2.3	(446)	T	[95/29]
$\text{C}_{20}\text{H}_{20}\text{O}_2$	2-diphenylmethyl-2-ethyl-1,3-cyclopentanedione	122.8±0.7	(360)	T	[89683-62-5]
	(342–377)	136.0	(298)	GS	[94/9]
$\text{C}_{20}\text{H}_{20}\text{O}_6$	1,1,1-tris(methoxycarbonyl)-2,2-diphenylethane				[160731-88-4]
		109.0±2.1			[95/2]
$\text{C}_{20}\text{H}_{21}\text{ClN}_6\text{O}_2$	N-2-[(2-chloro-6-cyano-4-nitrophenyl)azo]-5-(diethylamino)phenyl-propanamide (Blue 165)				[170464-52-5]
	(464–484)	90.7	(474)	GS	[95/2]
$\text{C}_{20}\text{H}_{22}\text{O}_2$	3-diphenylmethyl-3-ethyl-2,4-pentanedione				[160731-83-9]
	(349–387)	122.3±1.5	(368)	T	[00/11]
$\text{C}_{20}\text{H}_{24}\text{O}_6$	dibenzo-18-crown-6				[14187-32-7]
		178.8±6.9	(298)	CGC-DSC	[26902-55-6]
$\text{C}_{20}\text{H}_{30}$	hexacyclicpropylethane				[84/32]
		109.0±2.1			[2424-92-2]
$\text{C}_{20}\text{H}_{38}\text{O}_4$	eicosanedioic acid				[60/4][87/4]
	(380–395)	165.7±3.3	(388)	ME	[89/29]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{20}\text{H}_{40}\text{O}_2$	eicosanoic acid (337–346)	170.0±3.3 199.6±7.5	(298) (342)		[60/4][99/10] [506-30-9] [61/1][70/1][87/4]
$\text{C}_{20}\text{H}_{40}\text{O}_2$	ethyl stearate (297–306)	161.4	(301.5)	ME	[111-61-5] [87/4][67/18]
$\text{C}_{20}\text{H}_{42}$	<i>n</i> -eicosane	179.5±2.0 $\text{U}152.3\pm5.0$ 170.4	(367) (298) (298)	B B C	[112-95-8] [94/8] [91/1] [72/1]
$\text{C}_{20}\text{H}_{42}\text{O}$	1-eicosanol (327–341)	218±3.8 223±3.8	(332) (298)	ME	[629-96-9] [65/6][87/4] [65/6]
$\text{C}_{21}\text{H}_6\text{N}_{12}\text{O}_{18}$	2,4,6- <i>tris</i> (2,4,6-trinitrophenyl)-1,3,5-triazine (479–551)	167.9	(494)		[49753-54-0] [87/4]
$\text{C}_{21}\text{H}_{14}\text{N}_2\text{O}_3$	2-phenyl-3-benzoylquinoxaline-1,4-dioxide	167.4±4.0	(298)	ME	[13494-38-7] [97/25]
$\text{C}_{21}\text{H}_{14}\text{N}_2\text{O}_3$	1,4-diamino-2-benzoyl-9,10-anthraquinone	168.5			[84/40]
$\text{C}_{21}\text{H}_{15}\text{BrN}_2\text{O}_2$	1-amino-2-bromo-4-[(4-methylphenyl)amino]-9,10-anthraquinone (418–438)	167.0±6.0	(428)		[128-83-6] [84/35]
$\text{C}_{21}\text{H}_{15}\text{NO}_3$	2-hydroxy-4-[(4-methylphenyl)amino]-9,10-anthraquinone (349–378)	121.0±7.6	(363)		[84/35]
	[Note: Compound is listed as the 2-hydroxy-derivative in the paper; however, it is listed as the 1-hydroxy-derivative in <i>Chem. Abstracts</i> ]				
$\text{C}_{21}\text{H}_{16}$	3-methylcholanthrene (401–425)	127.2±2.4	(413)		[56-49-5] [87/4][64/3]
$\text{C}_{21}\text{H}_{16}\text{N}_2\text{O}_2$	1-anilino-4-(N-methylamino)-9,10-anthraquinone	136.9			[84/40]
$\text{C}_{21}\text{H}_{17}\text{N}_3\text{O}_3$	(5-cyano-3,4-diphenyl-6-oxo-1,6-dihydropyridazin-1-yl)acetate (396–414)	131.9±9.3	(405)	ME	[82232-20-0] [82/24]
$\text{C}_{21}\text{H}_{18}\text{F}_2$	1,1-difluoro-3,3,3-triphenylpropane	113.2±1.7	(298)		[193472-73-0] [97/34]
$\text{C}_{21}\text{H}_{19}\text{F}$	1-fluoro-3,3,3-triphenylpropane	129.3±0.6	(298)		[193472-69-4] [97/34]
$\text{C}_{21}\text{H}_{19}\text{F}$	2-fluoro-1,2,3-triphenylpropane	132.5±3.0	(298)		[193472-72-9] [97/34]
$\text{C}_{21}\text{H}_{20}\text{Cl}_2\text{O}_3$	(3-phenoxyphenyl)methyl- <i>cis</i> -3-(2,2-dichloroethyl)-2,2-dimethylcyclopropanecarboxylate ( <i>cis</i> -permethrin)	108.8	(323)	GS,A	[86/20] [561-27-3]
$\text{C}_{21}\text{H}_{23}\text{NO}_5$	diacetylmorphine (heroin) (324–339)	144.5±4.0	(331)	GS	[84/27]
$\text{C}_{21}\text{H}_{24}\text{O}_2$	3-diphenylmethyl-3-propyl-2,4-pentanedione	124.7	(298)	T,B	[160731-84-0] [95/2]
$\text{C}_{21}\text{H}_{26}$	[1,8]-para-cyclophane (354–376)	105±1.3	(365)	ME	[6169-94-4] [69/6][77/1]
	(354–376)	110.9±2.1	(298)	ME	[69/6][77/1]
$\text{C}_{21}\text{H}_{26}\text{O}_4$	2-hydroxy-4,4'-dibutoxybenzophenone	148.0		B	[6127-74-8] [99/22]
$\text{C}_{21}\text{H}_{30}\text{O}$	1,1-diadamantyl ketone (362–379)	109.0±1.8	(298)	ME	[38256-01-8] [92/2]
$\text{C}_{21}\text{H}_{42}\text{O}_2$	methyl eicosanoate (311–318)	190.8±10	(314)	ME	[1120-28-1] [65/6][87/4]
$\text{C}_{21}\text{H}_{42}\text{O}_2$	ethyl nonadecanoate (302–308)	149.7	(305)	ME	[18281-04-4] [87/4][67/18]
$\text{C}_{21}\text{H}_{44}$	heneicosane	141.8±10	(298)	B	[629-94-7] [91/1]
$\text{C}_{22}\text{H}_{10}\text{O}_2$	anthanthrone (dibenzochrysene-6,12-dione) (450–550)	152.2	(465)		[641-13-4] [87/4]
$\text{C}_{22}\text{H}_{12}$	anthranthrene (dibenzo[def,mno]chrysene)	135±5	(479)	ME	[191-26-4] [52/3]
$\text{C}_{22}\text{H}_{12}$	benzo[ghi]perylene (313–453)	129.9	(383)	GS	[191-24-2] [95/7]
	(389–468)	127.8	(404)	ME	[87/4][74/30]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{22}\text{H}_{12}\text{O}_2$	(450–510)	135.1	(465)		[87/4]
	(454–502)	125.5	(478)	ME	[67/2]
$\text{C}_{22}\text{H}_{14}$	6,13-pentacenequinone	$116.3 \pm 5.9$	(298)		[3029-32-1]
	1,2:6,7-dibenzophenanthrene (benzo[b]chrysene)	136.4	(417)	ME	[56/5][70/1]
$\text{C}_{22}\text{H}_{14}$	(398–513)	136.9	(413)		[214-17-5]
	pentacene	$156.9 \pm 13.6$	(463)	ME	[67/2]
$\text{C}_{22}\text{H}_{14}$	(443–483)	$154 \pm 5$	(512)	ME,TE	[98/3]
	(494–526)	$184 \pm 10$	(298)	ME,TE	[80/1]
	(495–530)	157.7	(505)	ME	[80/1]
	(455–555)	140.1	(456)	ME	[67/2]
$\text{C}_{22}\text{H}_{14}$	(409–527)	140.7	(424)		[213-46-7]
	picene	$159 \pm 6$	(383)	GS	[87/4]
$\text{C}_{22}\text{H}_{14}$	1,2:3,4-dibenzanthracene (benzo[b]triphenylene)	135	(298)	TE,ME	[215-58-7]
	(313–453)	134.1	(477)	GS	[95/7]
$\text{C}_{22}\text{H}_{14}$	(425–452)	$162 \pm 6$	(298)	TE,ME	[80/1]
	1,2:5,6-dibenzanthracene (dibenz[a,h]anthracene)	141.8	(457)	ME	[53-70-3]
	(417–502)	134.1		GS	[67/2]
$\text{C}_{22}\text{H}_{16}\text{O}$	3,8-dimethylnaphtho[3,2,1-kl]xanthene (3,8-dimethylceroxene)	138.2	(388)		[87/4][59/14]
	(373–433)	111.8	(620)		[36245-88-2]
$\text{C}_{22}\text{H}_{17}\text{NO}_3\text{S}$	2-(3-methoxypropyl)-1 <i>H</i> -xantheno[2,2,9-def]isoquinoline-1,3(2 <i>H</i> )-dione	150.8	(662)		[87/4]
	(605–647)	142.2 $\pm$ 2.3	(426)		[87/4]
	(647–685)	129.0 $\pm$ 4.7	(426)		[116-77-8]
$\text{C}_{22}\text{H}_{18}\text{N}_2\text{O}_2$	1-amino-2-methyl-4-[(4-methylphenyl)amino]-9,10-anthraquinone	197.5 $\pm$ 4.2		ME	[84/35]
	(418–435)	209.2 $\pm$ 8.4			[6408-50-8]
$\text{C}_{22}\text{H}_{18}\text{N}_2\text{O}_2$	1-(N-methylamino)-4-[(3-methylphenyl)amino]-9,10-anthraquinone	153.9 $\pm$ 3.9	(414)		[84/35]
	(418–434)	129.0 $\pm$ 4.7			[128-85-8]
$\text{C}_{22}\text{H}_{18}\text{N}_2\text{O}_2$	1-(N-methylamino)-4-[(4-methylphenyl)amino]-9,10-anthraquinone	192.9 $\pm$ 5.3		ME	[7144-15-2]
	(403–426)	198.8 $\pm$ 5.3	(298)		[73/21][77/1]
$\text{C}_{22}\text{H}_{20}\text{N}_2\text{O}_4$	N,N'-bis(2-methoxyphenyl)terephthalamide	227.6 $\pm$ 8.4		ME	[36360-34-6]
	(456–470)	141.4			[73/21][77/1]
$\text{C}_{22}\text{H}_{20}\text{N}_2\text{O}_4$	N,N'-bis(3-methoxyphenyl)terephthalamide	127.5 $\pm$ 0.8	(298)		[6957-81-9]
	(456–470)	114.3			[73/21][77/1]
$\text{C}_{22}\text{H}_{20}\text{N}_2\text{O}_4$	N,N'-bis(4-methoxyphenyl)terephthalamide	209.2 $\pm$ 8.4		ME	[16087-30-2]
	(407–426)	129.0 $\pm$ 4.7			[95/12]
$\text{C}_{22}\text{H}_{26}$	2-benzyl-2-fluoro-1,3-diphenylpropane	141.4		E,B	[95/12]
	(389–398)	116.6 $\pm$ 1.0	(394)		[59358-70-2]
$\text{C}_{22}\text{H}_{26}\text{N}_2\text{O}_2$	1,4-bis(N-butylamino)-9,10-anthraquinone	130.8 $\pm$ 0.8		ME	[83/16]
	(368–388)	96.4 $\pm$ 2.1	(378)		[17354-14-2]
$\text{C}_{22}\text{H}_{28}\text{N}_2\text{O}_2$	1,4-bis(N-isobutylamino)-9,10-anthraquinone	116.6 $\pm$ 1.0		ME	[84/35]
	(349–358)	116.6 $\pm$ 1.0	(358)		[10720-45-7]
$\text{C}_{22}\text{H}_{28}\text{N}_2\text{O}_2$	(4R,4'R,5R,5'R)-5,5-diphenyl-3,3',4,4'-tetramethyl-2,2'-biroxazolidine	116.6 $\pm$ 1.0		ME	[145513-29-7]
	(2R, 3R, 6R, 7R)-2,6-diphenyl-3,4,7,8-tetramethyl-cis-perhydro-[1,4]-oxazino-[3,2-b]-[1,4]-oxazine	116.6 $\pm$ 1.0	(358)		[95/19]
$\text{C}_{22}\text{H}_{28}\text{N}_2\text{O}_2$	(2R, 3S, 6R, 7S)-2,6-diphenyl-3,4,7,8-tetramethyl-cis-perhydro-[1,4]-oxazino-[3,2-b]-[1,4]-oxazine	116.6 $\pm$ 1.0		ME	[145438-85-3]
	(353–364)	116.6 $\pm$ 1.0	(358)		[95/19]
$\text{C}_{22}\text{H}_{28}\text{O}$	2,4,6-trisopropylbenzophenone	123.1 $\pm$ 1.6		ME	[145438-85-3]
	(353–364)	116 $\pm$ 7	(298)	C	[33574-11-7]
$\text{C}_{22}\text{H}_{28}\text{O}$	3',5'-diisopropyl-4,4-dimethyl-3-phenyl-1,2-benzocyclobuten-3-ol	116 $\pm$ 7			[82/10]
	(353–364)	116 $\pm$ 7			[33574-16-2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )		CAS registry number
Polymorph	Temperature range (K)			Method	Reference
$\text{C}_{22}\text{H}_{38}$	(354–364)	117.9	(298)	C	[82/10]
	<i>meso</i> 3,4-di(1-cyclohexen-1-yl)-2,2,5,5-tetramethylhexane	$117.2 \pm 2.4$	(376)	T	[62678-54-0]
$\text{C}_{22}\text{H}_{31}\text{NO}_4$	(347–404)	$117.2 \pm 2.4$	(376)	T	[93/6]
	N,N-bis(3-phenoxy-2-hydroxypropyl)butyl amine	114.3	(378)		[23257-62-7]
$\text{C}_{22}\text{H}_{42}$	(363–411)	146.0 ± 4.2	(378)		[87/4]
	<i>meso</i> -(E, E)-5,6-di- <i>tert</i> -butyl-2,2,9,9-tetramethyl-3,7-decadiene	110.0 ± 1.7	(325)	T	[76/19]
$\text{C}_{22}\text{H}_{42}$	(297–353)	$110.0 \pm 1.7$	(325)	T	[95/1]
	( <i>dl</i> )-(E, E)-5,6-di- <i>tert</i> -butyl-2,2,9,9-tetramethyl-3,7-decadiene	74.4 ± 1.7	(307)	T	[95/1]
$\text{C}_{22}\text{H}_{44}\text{O}_2$	ethyl eicosanoate	171.5	(310)	ME	[18281-05-5]
	(307–313)	$171.5 \pm 1.0$	(310)	ME	[87/4][67/18]
$\text{C}_{22}\text{H}_{46}\text{O}$	1-docosanol	206.7 ± 10	(330)	ME	[661-19-8]
	(335–341)	238.5 ± 10	(298)	ME	[65/6][87/4]
$\text{C}_{22}\text{H}_{46}$	docosane	172.6 ± 2.0	(391)	B	[629-97-0]
		U 151.1 ± 10	(298)	B	[94/8]
$\text{C}_{23}\text{H}_{24}\text{O}_6$	<i>tris</i> (ethoxycarbonyl)-9-fluorenylmethane	143.2	(298)	GS	[95/29]
		$143.2 \pm 1.0$	(298)	GS	[170464-53-6]
$\text{C}_{23}\text{H}_{25}\text{F}$	1-adamantylfluorodiphenylmethane	125.9 ± 1.3	(373)	T	[154393-25-6]
	(353–393)	$125.9 \pm 1.3$	(373)	T	[94/10]
$\text{C}_{23}\text{H}_{26}\text{O}_6$	1,1,1- <i>tris</i> (ethoxycarbonyl)-2,2-diphenylethane	140.1	(298)	GS	[95/29]
		$140.1 \pm 1.0$	(298)	GS	[98319-26-7]
$\text{C}_{23}\text{H}_{36}\text{N}_2\text{O}_2$	(5 $\alpha$ ,17 $\beta$ )-N-(1,1-dimethylethyl)-3-oxo-4-azaandrost-1-ene-17-carboxamide (Finasteride)	143.7		TGA	[97/36]
	(463–488)	$143.7 \pm 1.0$	(298)	B	[638-67-5]
$\text{C}_{23}\text{H}_{48}$	tricosane	U146.8 ± 10	(298)	B	[91/1]
		$146.8 \pm 1.0$	(298)	B	[191-07-1]
$\text{C}_{24}\text{H}_{12}$	coronene	133.1 ± 5.1	(463)	ME	[98/3]
	(421–504)	$133.1 \pm 5.1$	(383)	GS	[95/7]
	(313–453)	143.2	(468)	ME	[87/4][74/30]
	(427–510)	135.9	(468)	ME	[67/2]
		128.4	(473)	ME	[58/1]
	(433–513)	147	(407)	ME	[52/3]
	(476–555)	143.2	(407)	ME	[51/12]
		148.5	(407)	ME	[102234-01-5]
$\text{C}_{24}\text{H}_{12}$	<i>bis</i> -benzo[3,4]cyclobuta[1,2-a:1',2'-c]biphenylene ([4]phenylene)	131.0 ± 4.2			[00/18]
		$131.0 \pm 4.2$			[3302-52-1]
$\text{C}_{24}\text{H}_{12}\text{O}_2$	3,4:9,10-dibenzpyrene-5,8-quinone	112.5 ± 5.4			[56/5][70/1]
		$112.5 \pm 5.4$			[192-65-4]
$\text{C}_{24}\text{H}_{14}$	dibenzo[a,e]pyrene	146.4	(429)		[87/4]
	(414–506)	$146.4 \pm 1.0$	(480)	ME	[67/2]
$\text{C}_{24}\text{H}_{14}$	(434–526)	137.6	(480)	ME	[192-51-8]
	dibenzo[fg,op]naphthacene	147.4	(445)		[87/4]
	(430–555)	$147.4 \pm 1.0$	(490)	ME	[67/2]
	(454–526)	146.9	(490)	ME	[1806-34-4]
$\text{C}_{24}\text{H}_{16}\text{N}_2\text{O}_2$	(called 1,2,6,7-dibenzpyrene in paper, which we have taken to be dibenzo[fg,op]naphthacene based upon the melting point temperature reported in the paper)	140	(480)		[89/7]
	2,2'-(1,4-phenylene)bis(5-phenyl)oxazole	94.4	(615)		[87/4]
$\text{C}_{24}\text{H}_{18}$	1,3,5-triphenylbenzene	150.9	(298)	CGC-DSC	[612-71-5]
	(364–388)	145.6 ± 0.9	(376)	T	[98/5]
		150.3 ± 0.9	(298)		[97/15]
		152 ± 0.3	(298)	C,ME	[97/15]
	(410–444)	142	(425)	ME	[74/4][87/4]
	(384–400)	142.2	(422)	ME	[67/2]
$\text{C}_{24}\text{H}_{24}\text{O}_4$		149.7 ± 4.1	(298)	ME	[58/1][70/1]
	<i>syn</i> 4,9-bis(methoxycarbonyl)pagodane (dimethyl undecacyclo[9.9.0.0 <sup>1,5</sup> .0 <sup>2,12</sup> .0 <sup>2,18</sup> .0 <sup>3,7</sup> .0 <sup>6,10</sup> .0 <sup>8,12</sup> .0 <sup>11,15</sup> .0 <sup>13,17</sup> .0 <sup>16,20</sup> ]eicosane-4- <i>syn</i> , 9- <i>syn</i> -dicarboxylate)				[89702-41-0]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
	(393–447)	146.1 ± 3.0	(420)	T	[94/9]
$\text{C}_{24}\text{H}_{24}\text{O}_4$	1,6-bis(methoxycarbonyl)dodecahedrane (dimethyl undecacyclo-[9.9.0.0 <sup>2,9</sup> .0 <sup>3,7</sup> .0 <sup>4,20</sup> .0 <sup>5,18</sup> .0 <sup>6,16</sup> .0 <sup>8,15</sup> .0 <sup>10,14</sup> .0 <sup>12,19</sup> .0 <sup>13,17</sup> ]eicosane-1,6-dicarboxylate)				[124316-65-0]
	(395–450)	139.7 ± 1.3	(422)	T	[94/9]
$\text{C}_{24}\text{H}_{26}\text{N}_2\text{O}_2$	1,5-dipiperidylanthraquinone				[14580-70-2]
	(408–458)	173.3	(428)		[58/1][87/4]
$\text{C}_{24}\text{H}_{28}\text{P}_2\text{O}_2$	1,4-bis(diphenylphosphino)butane				[7688-25-7]
		171.6	(443)	B	[89/28]
$\text{C}_{24}\text{H}_{30}$	1,1'-diphenyl-1,1'-bicyclohexyl				[59358-71-3]
		150.2		E,B	[83/16]
$\text{C}_{24}\text{H}_{30}\text{O}_4$	2,2'-diphenyl-bi-(5,5-dimethyl-1,3-dioxan-2-yl)				[167321-36-0]
	(372–420)	130.2 ± 1.8	(396)	T	[95/13]
$\text{C}_{24}\text{H}_{32}$	[6.6]-para-cyclophane				[4384-23-0]
	(352–371)	108.8 ± 0.8	(361)	ME	[69/6][77/1]
		115.1 ± 2.1	(298)	ME	[69/6][77/1]
$\text{C}_{24}\text{H}_{48}\text{O}_2$	ethyl docosanoate				[5908-87-2]
	(313–318)	196.5	(315.5)	ME	[87/4][67/18]
$\text{C}_{24}\text{H}_{50}$	tetracosane				[646-31-1]
		162 ± 12	(298)	B	[91/1]
$\text{C}_{25}\text{H}_{20}$	tetraphenylmethane				[630-76-2]
		140.0	(298)		[99/25]
	(396–466)	150.6 ± 4	(298)	TE,ME	[72/5][77/1]
	(404–466)	143.3 ± 1	(419)	ME	[87/4][72/5]
$\text{C}_{25}\text{H}_{36}\text{O}_2$	2,2'-methylenebis(6- <i>tert</i> -butyl-4-methylphenol)				[119-47-1]
	(383–403)	114.0	(393)	GS	[71/19]
$\text{C}_{25}\text{H}_{50}\text{O}_2$	ethyl tricosanoate				[18281-07-7]
	(316–322)	175.2	(319)	ME	[87/4][67/18]
$\text{C}_{25}\text{H}_{52}$	pentacosane				[629-99-2]
		173.6 ± 10	(298)	B	[91/1]
$\text{C}_{26}\text{H}_{16}$	dibenzo[g,p]chrysene				[191-68-4]
	(408–493)	142.2	(423)		[87/4]
	(417–500)	141.8	(458)	ME	[67/2]
$\text{C}_{26}\text{H}_{18}$	9,10-diphenylanthracene				[1499-10-1]
	(313–453)	137.5	(383)	GS	[95/7]
		116.4			[58/4]
	(393–433)	143.6	(413)		[58/1][87/4]
	(481–502)	156.9 ± 4.2	(492)	HSA	[53/2][70/1]
$\text{C}_{26}\text{H}_{18}$	9,9'-bifluorenyl				[1530-12-7]
	(383–408)	131.8 ± 1.1	(395)	T	[94/2]
		132.6 ± 1.1	(298)		[94/2]
$\text{C}_{26}\text{H}_{20}$	tetraphenylethene				[632-51-9]
	(343–389)	129.3 ± 0.7	(366)	T	[99/29]
		133.4 ± 0.7	(298)		[99/29]
$\text{C}_{26}\text{H}_{20}\text{N}_2\text{O}_2$	2,2'-(1,4-phenylene)bis(4-methyl-5-phenyl)oxazole				[3073-87-8]
		150	(480)		[89/7]
$\text{C}_{26}\text{H}_{22}$	1,1,2,2-tetraphenylethane				[632-50-8]
		136.8 ± 2.9	(298)	GS	[90/12]
	(370–423)	131.4 ± 2.1	(396)	GS	[90/12]
$\text{C}_{26}\text{H}_{22}$	1,1,1,2-tetraphenylethane				[2294-94-2]
		132.6 ± 2.1	(298)	GS	[90/12]
	(340–400)	128.7 ± 2.1	(370)	GS	[90/12]
		126.4 ± 1.7	(434)	HSA	[56/1]
$\text{C}_{26}\text{H}_{26}$	pentacyclo[18.2.2.2(9,12).0(4,15).0(4,15).0(6,17)]hexacos-4,6(17),9,11,-15,20,22,23,25-nonane (triple layered [2.2]paracyclophane)				[35117-21-6]
	(299–412)	119.1 ± 1.5		TSGC	[80/15]
		125.9 ± 2.5	(298)	TSGC	[80/15]
$\text{C}_{26}\text{H}_{38}$	2,3-dimethyl-2,3-bis-(4- <i>tert</i> -butylphenyl)-butane				[5171-91-5]
		161.9		E,B	[83/16]
$\text{C}_{26}\text{H}_{54}$	hexacosane				[630-01-3]
		177.2 ± 10	(298)	B	[91/1]
$\text{C}_{27}\text{H}_{48}$	17-(1,5-dimethylhexyl)-10,13-dimethyl-hexahydro-1 <i>H</i> -cyclopenta[a]-phenanthrene (5α-cholestane)				[481-21-0]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	( $T_m/\text{K}$ )	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{27}\text{H}_{56}$	heptacosane	133.8	(298)		[00/10] [593-49-7]
$\text{C}_{28}\text{H}_{14}$	phenanthro[1,10,9,8-opqra]perylene (580–630)	196.0±30	(298)	B	[91/1] [190-39-6]
$\text{C}_{28}\text{H}_{12}\text{Cl}_2\text{N}_2\text{O}_4$	C.I. Vat Blue 6 (519–634)	180.5±5	(605)	ME	[87/4][52/3] [130-20-1]
$\text{C}_{28}\text{H}_{14}\text{N}_2\text{O}_4$	C.I. Vat Blue 4 (519–634)	199	(577)	GS	[86/14] [81-77-6]
$\text{C}_{28}\text{H}_{18}$	9,9'-bianthryl	167	(577)	GS	[86/14] [1055-23-8]
$\text{C}_{28}\text{H}_{18}$	(413–473)	128.4±0.2			[70/1][58/1]
		127.9	(443)		[58/1][87/4]
		148.1			[51/2][60/1]
$\text{C}_{28}\text{H}_{18}$	9,9'-biphenanthryl	151.5			[20532-03-0] [51/2][60/1]
$\text{C}_{28}\text{H}_{22}$	9,9'-dimethyl-9,9'-bifluorenyl (368–403)	118.7±1.3	(386)	T	[94/2] [94/2]
		119.7±1.3	(298)		
$\text{C}_{28}\text{H}_{30}\text{N}_4$	2,3,7,8,12,13,17,18-octamethylporphyrin (593–653)	268±11		GS	[1257-25-6] [01/12]
$\text{C}_{28}\text{H}_{38}$	1,1'-diphenyl-1,1'-bicyclooctyl	174.5		E,B	[59358-73-5] [83/16]
$\text{C}_{28}\text{H}_{58}$	octacosane	208.9±10	(298)	B	[630-02-4] [91/1]
$\text{C}_{30}\text{H}_{14}\text{O}_2$	8,16-pyranthenedione (C. I. Vat Orange 9) (503–543)	197.7	(518)		[128-70-1] [87/4]
		181.2	(498)	ME	[51/12]
$\text{C}_{30}\text{H}_{16}$	pyranthrene	194.5±6.7	(595)	ME	[191-13-9] [52/3]
$\text{C}_{30}\text{H}_{46}$	3,4-diethyl-3,4-bis-(4- <i>tert</i> -butylphenyl)-hexane	167.8		E,B	[85668-74-2] [83/16]
$\text{C}_{31}\text{H}_{15}\text{NO}_3$	C.I. Vat Green 3 (519–634)	155	(577)	GS	[3271-76-9] [86/14]
$\text{C}_{32}\text{H}_2\text{Br}_{16}\text{N}_8$	hexadecabromophthalocyanine (438–493)	109.2±16.3	(453)	ME	[28746-04-5] [87/4][70/7]
$\text{C}_{32}\text{H}_2\text{Cl}_{16}\text{N}_8$	hexadecachlorophthalocyanine (398–443)	141.0±17.6	(413)	ME	[28888-81-5] [87/4][70/7]
$\text{C}_{32}\text{H}_{14}$	ovalene	211.7±7.9	(600)	ME	[190-26-1] [52/3]
$\text{C}_{32}\text{H}_{18}\text{N}_8$	$\beta$ -29 <i>H</i> ,31 <i>H</i> -phthalocyanine (598–698)	223.8±1.3		ME	[574-93-6] [00/30]
$\text{C}_{32}\text{H}_{50}$	2,4,5,7-tetramethyl-4,5-bis-(4- <i>tert</i> -butylphenyl)-octane	182.8		E,B	[85668-75-3] [83/16]
$\text{C}_{32}\text{H}_{50}$	4,5-diethyl-4,5-bis-(4- <i>tert</i> -butylphenyl)-octane	182.4		E,B	[85668-73-1] [83/16]
$\text{C}_{32}\text{H}_{66}$	dotriacontane	271.1±2.5			[544-85-4] [70/1]
$\text{C}_{34}\text{H}_{16}\text{O}_2$	dibenzanthrone (violanthrone) (513–548)	208.8	(528)		[116-71-2] [87/4]
		202.9	(542)	ME	[51/12]
$\text{C}_{34}\text{H}_{16}\text{O}_2$	isodibenzanthrone (isoviolanthrone) (523–553)	221.1	(538)		[128-64-3] [87/4]
		215.5	(537)	ME	[51/12]
$\text{C}_{34}\text{H}_{18}$	benzo[rst]phenanthro[1,10,9-cde]pentaphene (478–603)	154.1	(493)		[190-93-2] [87/4]
$\text{C}_{34}\text{H}_{18}$	violanthrene	223.8±8.8	(590)		[81-31-2] [52/3][60/1]
$\text{C}_{34}\text{H}_{18}$	violanthrene A (melting point 478 °C) (562–724)	195.8	(653)	ME	[67/2]
$\text{C}_{34}\text{H}_{18}$	violanthrene B (melting point 330 °C) (555–625)	153.5	(590)	ME	[67/2]

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_{\text{m}}$ /kJ mol <sup>-1</sup>	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
(Note: This entry is likely the original reference for benzo[rst]phenanthro[1,10,9-cde]pentaphene listed in reference [87/4]. <i>Chemical Abstracts</i> cites [67/2] as reporting the heat of sublimation of benzo[rst]-phenanthro[1,10,9-cde]pentaphene.)					
C <sub>34</sub> H <sub>18</sub>	isoviolanthrene A (melting point 510 °C) (588–724)	218	(590)	ME	[4430-29-9] [52/3][60/1]
C <sub>34</sub> H <sub>18</sub>	tetrabenzo[de,hi,op,st]pentacene (348–448)	118.5	(363)	ME	[191-79-7] [87/4][67/2]
C <sub>34</sub> H <sub>54</sub>	4,5-dipropyl-4,5-bis-(4- <i>tert</i> -butylphenyl)-octane 198.3			E,B	[85668-72-0] [83/16]
C <sub>38</sub> H <sub>30</sub>	1-diphenylmethylene-4-triphenylmethyl-2,5-cyclohexadiene (348–394)	114.6	(363)		[18909-18-7] [87/4]
C <sub>38</sub> H <sub>30</sub> O <sub>2</sub>	bis(triphenylmethyl)peroxide (392–434)	158.1	(407)		[596-30-5] [87/4]
C <sub>38</sub> H <sub>62</sub>	5,6-dibutyl-5,6-bis-(4- <i>tert</i> -butylphenyl)-decane 220.9			E,B	[85668-76-4] [83/16]
C <sub>42</sub> H <sub>28</sub>	5,6,11,12-tetraphenyltetracene (453–523)	160.6±4.2	(488)		[517-51-1] [58/1][70/1]
C <sub>44</sub> H <sub>26</sub> Br <sub>4</sub> N <sub>4</sub>	5,10,15,20-tetrakis(3-bromophenyl)porphine 204±4			GS	[68772-71-4] [00/36]
C <sub>44</sub> H <sub>26</sub> Br <sub>4</sub> N <sub>4</sub>	5,10,15,20-tetrakis(4-bromophenyl)porphine 135±4			GS	[29162-73-0] [00/36]
C <sub>44</sub> H <sub>26</sub> Cl <sub>4</sub> N <sub>4</sub>	5,10,15,20-tetrakis(4-chlorophenyl)porphine 311±5			GS	[22112-77-2] [00/36]
C <sub>44</sub> H <sub>26</sub> F <sub>4</sub> N <sub>4</sub>	5,10,15,20-tetrakis(2-fluorophenyl)porphine 225±8			GS	[27185-62-2] [00/36]
C <sub>44</sub> H <sub>26</sub> F <sub>4</sub> N <sub>4</sub>	5,10,15,20-tetrakis(4-fluorophenyl)porphine 178±4			GS	[37095-43-5] [00/36]
C <sub>44</sub> H <sub>30</sub> N <sub>4</sub>	5,10,15,20-tetraphenylporphine 240±7			GS	[917-23-7] [00/36]
form I	(540–630)	267±9			[94/41]
form II	(630–670)	185±10			[94/41]
	(588–678)	110.9±5.0	(603)	ME	[87/4][70/7] [37083-40-2]
C <sub>48</sub> H <sub>38</sub> N <sub>4</sub>	5,10,15,20-tetrakis(2-methylphenyl)porphine 159±5			GS	[00/36]
C <sub>48</sub> H <sub>38</sub> N <sub>4</sub>	5,10,15,20-tetrakis(3-methylphenyl)porphine 177±5			GS	[50849-45-1] [00/36]
C <sub>48</sub> H <sub>38</sub> N <sub>4</sub>	5,10,15,20-tetrakis(4-methylphenyl)porphine 178±3			GS	[14527-51-6] [00/36]
C <sub>60</sub>	buckminsterfullerene (775–1033)	180±2	(298)	ME	[99685-96-8] [00/37]
	(789–907)	152.8±0.1	(897)	GS	[98/4]
		183.5±1.0	(298)		[98/4]
		179.2±3.5	(298)		[96/20][98/4]
	(730–990)	175.2±2.9	(860)	ME,TE	[95/8]
		181±2.0	(298)	ME,TE	[95/8]
		219.6		TGA	[95/35]
	(546–722)	180±10.0	(634)	UV	[94/18]
		158±3.0	(700)	ME	[94/12]
		168.5±1.2	(298)	ME	[94/12][98/4]
		181.1±2.6	(298)	ME	[94/25][98/4]
		181.4±2.3	(700)	MS	[94/15][92/22]
		158.6	(773)	ME	[93/15]
		184.1±3.1	(298)	GS	[92/21][98/4]
		183.2±3.5	(298)	ME	[92/22][98/4]
		180.6±1.5	(298)	ME	[92/23][98/4]
	(673–873)	159.0±4.2		ME	[92/16]
		>163 (powder)		TGA	[92/10]
	(640–800)	167.8±5.4	(707)	ME,MS	[91/9]
		U90.9		ME,MS	[90/20]
C <sub>60</sub> F <sub>16</sub>	hexadecafluorobuckminsterfullerene 186±9			ME,MS	[00/32]
C <sub>60</sub> F <sub>36</sub>	hexatriacontylfluorobuckminsterfullerene (4 isomer average)				

TABLE 6. Reported enthalpies of sublimation of organic compounds, 1910–2001—Continued

Molecular formula	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Polymorph	Temperature range (K)				Reference
$\text{C}_{60}\text{F}_{36}$	(422–525)	134±6	(473)	MS	[94/26][96/8]
	hexatriacontylfluorobuckminsterfullerene	139±8			[150180-35-1]
$\text{C}_{60}\text{F}_{42}$	(408–539)	135±8.0	(466)	ME,MS	[00/8]
	dotetracontylfluorobuckminsterfullerene				[99/2]
$\text{C}_{60}\text{F}_{44}$	(430–510)	110±10		ME,MS	[150155-92-3]
	tetratetracontylfluorobuckminsterfullerene				[00/14]
$\text{C}_{60}\text{F}_{44}\text{O}$	(430–510)	112±6		ME,MS	[147771-02-6]
	tetracontylfluorobuckminsterfullerene				[00/14]
$\text{C}_{60}\text{F}_{46}$	(430–510)	111±3		ME,MS	[337371-51-4]
	hexatetracontylfluorobuckminsterfullerene				[00/14]
$\text{C}_{60}\text{F}_{48}$	(430–510)	114±7		ME,MS	[143471-96-9]
	octatetracontylfluorobuckminsterfullerene				[00/14]
$\text{C}_{60}\text{H}_{16}$	(395–528)	109±7.0	(476)	ME,MS	[143471-98-1]
	hexadecahydrobuckminsterfullerene	≥186		E	[99/2][00/34]
$\text{C}_{60}\text{H}_{36}$	hexatriacontylhydrobuckminsterfullerene			MS	[00/38][01/11]
	(560–680)	162±5			[01/11]
		152	(630)		[01/11]
$\text{C}_{70}$		175	(298)		
	Fullerene— $\text{C}_{70}$				[115383-22-7]
	(864–1099)	199±2	(298)	ME	[00/37]
	(783–904)	189.8±3.1	(844)	ME	[96/1]
		200±6.0	(298)		[96/1]
		174±3.0	(740)	ME	[94/12]
		193.4±1.5	(750)	MS	[94/15]
		186.6	(788)	ME	[93/15]
	(673–873)	188.3±4.2		ME	[92/16]
$\text{C}_{76}$	(640–800)	180.0±9.2	(739)	ME,MS	[91/9]
	Fullerene— $\text{C}_{76}$				[135113-15-4]
$\text{C}_{76}\text{H}_{94}\text{N}_4$	(637–911)	190±7	(764)	ME	[98/30]
	(834–1069)	206±4.0	(298)	TE	[97/21]
$\text{C}_{84}$	5,10,15,20-tetrakis(3,5-di- <i>tert</i> -butylphenyl)porphine	209±5			[89372-90-7]
	(658–980)	202±4.0	(853)	ME	[00/36]

TABLE 7. Enthalpies of sublimation of some organometallic and inorganic compounds, 1910–2001

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
Molecular formula/polymer	Temperature range (K)			Method	
A1					
C <sub>5</sub> H <sub>5</sub> AlBr <sub>3</sub> N	aluminum tribromide–pyridine complex (501–633)	71.2±0.6 83.3	T B,E	[15348-61-5] [89/24] [67/12]	
C <sub>15</sub> H <sub>3</sub> AlF <sub>18</sub> O <sub>6</sub>	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)aluminum(III) (333–363) (324–344)	52 77.6±6.2 79.0±6.5 74.1±2.5 109.6±3.8	TGA BG (334) (298) (335)	[17786-67-3] [00/35] [87/20][88/22] [87/20] [85/23][87/20] [72/17]	
C <sub>15</sub> H <sub>12</sub> AlF <sub>9</sub> O <sub>6</sub>	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)aluminum(III) (373–403) (363–423) (369–392)	74 113.4±1.3 102.7±3.2 108±2.0 43.1 93.7±6.7 41.0 40.0	TGA GS (443) (375)	[14354-59-7] [00/35] [85/16] [78/27] [77/18][88/16] [77/25] [72/17] [65/11] [60/17]	
C <sub>15</sub> H <sub>21</sub> AlO <sub>6</sub>	<i>tris</i> (2,4-pentanedionato)aluminum(III) (413–443) (432–464)	93 120±3.0 102.0±3.2 47.1±1.0 118.9±7.9 24.3 121.7±4.2 66.1±3.3 23.4 20.5	TGA ME BG (298) (448) (458) (298) (398)	[13963-57-0] [00/35] [77/18][88/2] [88/22] [81/13] [80/30] [77/25] [75/19] [72/17] [65/11] [60/17]	
C <sub>16</sub> H <sub>40</sub> Al <sub>2</sub> N <sub>2</sub>	tetramethylbis[μ-[N-(1-methylethyl)-2-propanaminto]]dialuminum(III)	99.2	ME	[115381-27-6] [88/20]	
C <sub>18</sub> H <sub>15</sub> Al	triphenylaluminum	172±5	(455)	ME,TE	[841-76-9] [84/8]
C <sub>24</sub> H <sub>12</sub> AlF <sub>9</sub> O <sub>6</sub> S <sub>3</sub>	<i>tris</i> (1-(2-thenoyl)-4,4,4-trifluoro-1,3-butanedione)aluminum(III)	U46.4		[14054-83-2] [60/17]	
C <sub>27</sub> H <sub>18</sub> AlN <sub>3</sub> O <sub>3</sub>	<i>tris</i> (8-hydroxyquinolinato)aluminum(III)	137.7	TGA	[2085-33-8] [95/35]	
C <sub>30</sub> H <sub>18</sub> AlF <sub>9</sub> O <sub>6</sub>	<i>tris</i> (1-phenyl-4,4,4-trifluoro-1,3-butanedione)aluminum(III)	U55.2		[14323-12-7] [60/17]	
C <sub>30</sub> H <sub>27</sub> AlO <sub>6</sub>	<i>tris</i> (1-phenyl-1,3-butanedionato)aluminum(III)	186.8±2.1 195.2±2.1 326.5 193.7±0.3	ME,TE (470) (298) (496) (298)	[14376-06-8] [95/9] [95/9] [88/16] [83/20]	
C <sub>30</sub> H <sub>30</sub> F <sub>21</sub> AlO <sub>6</sub>	<i>tris</i> (1,1,2,2,3,3-heptafluoro-7,7-dimethyl-4,6-octanedionato)aluminum(III)	71.1±2.5	(381)	[18716-26-2] [72/17]	
C <sub>32</sub> H <sub>16</sub> AlClN <sub>8</sub>	aluminum(III)-(phthalocyaninato)chloro complex	236.4±1.7	ME	[14154-42-8] [00/30]	
C <sub>32</sub> H <sub>16</sub> AlFN <sub>8</sub>	aluminum(III)-(phthalocyaninato)fluoro complex	266.9±2.5	ME	[5196-93-4] [00/30]	
C <sub>33</sub> H <sub>57</sub> AlO <sub>6</sub>	<i>tris</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)aluminum(III)	88 119±3.0	TGA	[14319-08-5] [00/35] [77/18][83/20]	
Am					
(C <sub>15</sub> H <sub>3</sub> AmF <sub>18</sub> O <sub>6</sub> )–2(C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P)	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)americium(III)-2(tributylphosphate) complex	133.9±1.7	(468)	[58760-64-8] [78/32]	
(C <sub>15</sub> H <sub>12</sub> AmF <sub>9</sub> O <sub>6</sub> )–2(C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P)	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)americium(III)-2(tributylphosphate) complex	222.6±29.2	(527)	[75101-27-8] [78/32]	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)		Method	Reference
(C <sub>24</sub> H <sub>30</sub> AmF <sub>9</sub> O <sub>6</sub> )–2(C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P)	<i>tris</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)americium(III)-2(tributylphosphate) complex (438–493)	129.7±23.4	(465)	TRM [75101-26-7]
C <sub>33</sub> H <sub>57</sub> AmO <sub>6</sub>	<i>tris</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)americium(III)	200.8		[78/32] [71817-66-8]
As	(373–423)		ME	[79/30]
C <sub>4</sub> As <sub>4</sub> F <sub>12</sub>	<i>tetrakis</i> (trifluoromethyl)tetraarsenetane (317–354)	76.6	(335)	[7547-15-1] [66/14]
C <sub>15</sub> H <sub>30</sub> AsN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (N,N-diethyldithiocarbamate)arsenic(III)	124±3	(298)	[17767-20-3] [87/16]
C <sub>18</sub> H <sub>15</sub> As	triphenylarsine	98.3±8.4		[603-32-7] [82/20][64/6]
C <sub>18</sub> H <sub>15</sub> AsO	triphenylarsine oxide	149.0±5.4		[1153-05-5] [94/31]
C <sub>21</sub> H <sub>42</sub> AsN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (dipropylidithiocarbamate)arsenic(III)	145.1±5.3	(298)	DSC,E [86431-46-1] [99/34]
C <sub>27</sub> H <sub>54</sub> AsN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (N,N-dibutylidithiocarbamate)arsenic(III)	128±3	(298)	[48233-55-2] [94/31]
C <sub>27</sub> H <sub>54</sub> AsN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (N,N-diisobutylidithiocarbamate)arsenic(III)	128±2	(298)	[41582-74-5] [97/31]
Au				
C <sub>7</sub> H <sub>10</sub> AuF <sub>3</sub> O <sub>2</sub>	dimethyl(1,1,1-trifluoro-2,4-pentanedionato)gold(III) (265–300)	83.5		[00/33]
B				
CH <sub>5</sub> BO <sub>2</sub>	dihydroxymethylborane (293–362)	64.1	(308)	[13061-96-6] [87/4]
	(298–338)	65.2	(318)	[40/4]
(CH <sub>5</sub> N)–(BH <sub>3</sub> )	methylamine–borane complex (273–318)	78.7±4.2	ME	[1722-33-4] [59/16]
(CH <sub>5</sub> N)–(C <sub>3</sub> H <sub>9</sub> BO <sub>3</sub> )	methylamine–methylborate complex	58.2		[51/13]
CH <sub>11</sub> B <sub>2</sub> NS <sub>1</sub>	N-methyl-N-silylaminodiborane (214–230)	36.6	(222)	[50/7] [353-44-6]
(C <sub>2</sub> H <sub>3</sub> OF)–(BF <sub>3</sub> )	methylfluorocarbonyl–trifluoroboron complex (223–273)	26.3	(248)	[57/8]
(C <sub>2</sub> H <sub>5</sub> B <sub>3</sub> )–(C <sub>3</sub> H <sub>9</sub> N)	1,5-dicarborpentaborane(5)–trimethylamine complex (220–253)	49.7	(236)	[72/28]
C <sub>2</sub> H <sub>6</sub> BF <sub>2</sub> N	dimethylamino difluoroboron (308–359)	76.5	(333)	[54/13]
(C <sub>2</sub> H <sub>7</sub> N)–(BH <sub>3</sub> )	dimethylamine–borane complex (273–308)	77.4±2.9	ME	[74-94-2] [69/16]
(C <sub>2</sub> H <sub>7</sub> N)–(C <sub>3</sub> H <sub>9</sub> BO <sub>3</sub> )	dimethylamine–methylborate complex	70.3		[51/13]
C <sub>2</sub> H <sub>6</sub> B <sub>4</sub>	1,6-dicarbahexaborane (190–209)	31.2	(194)	[20693-67-8] [87/4]
C <sub>2</sub> H <sub>12</sub> B <sub>10</sub>	1,2-dicarbadodecaborane ( <i>o</i> -carborane) (283–333)	50.3	(318)	[16872-09-6] [87/4]
	(333–423)	49.4	(348)	[87/4]
		65.4±1.0	(298)	[82/20][76/13]
C <sub>2</sub> H <sub>12</sub> B <sub>10</sub>	1,7-dicarbadodecaborane ( <i>m</i> -carborane) (283–333)	67.5	(298)	[16986-24-6] [87/4]
	(333–423)	63.3	(348)	[87/4]
		58.5±1.0	(298)	[82/20][76/13]
C <sub>2</sub> H <sub>12</sub> B <sub>10</sub>	1,12-dicarbadodecaborane ( <i>p</i> -carborane)	61.3±1.0	(298)	[20644-12-6] [82/20][76/13]
(C <sub>3</sub> H <sub>7</sub> N)–(BH <sub>3</sub> )	azetidine–borane complex (297–321)	67.9	(309)	[56/17]
(C <sub>3</sub> H <sub>9</sub> B)–(C <sub>2</sub> H <sub>9</sub> Nsi)	trimethylboron–silyldimethylamine complex (243–268)	51.4	(255)	[54/11]
(C <sub>3</sub> H <sub>9</sub> B)–(C <sub>7</sub> H <sub>13</sub> N)	trimethylboron–azabicyclo[2.2.2]octane complex (273–388)	79.6		[48/3]
(C <sub>3</sub> H <sub>9</sub> N)–(BF <sub>3</sub> )	trimethylamine–boron trifluoride complex (373–413)	68.9	(393)	[420-20-2] [87/4][43/5]
(C <sub>3</sub> H <sub>9</sub> )–(B <sub>2</sub> F <sub>4</sub> )	trimethylamine–diboron tetrafluoride (tetramer)			[3801-72-7]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Reference
C <sub>3</sub> H <sub>9</sub> B <sub>3</sub> Cl <sub>3</sub> N <sub>3</sub>	(366–399) 2,4,6-trichloro-1,3,5-trimethylborazine (363–404)	65.1 57.9	(382) (383.5)	[58/8] [703-86-6] [87/4]
(C <sub>3</sub> H <sub>9</sub> N)–(BH <sub>3</sub> )	trimethylamine–borane complex (273–363) (296–367)	56.9±0.8 57	(311)	[75-22-9] [59/16] [87/4][37/1]
(C <sub>3</sub> H <sub>9</sub> N)–(C <sub>3</sub> H <sub>6</sub> BCl <sub>2</sub> N)	trimethylamine–dimethylaminoboron dichloride complex (293–342)	66.1±1.7	(317)	[52/8] [4023-40-9]
C <sub>3</sub> H <sub>10</sub> BN	N-methylaminodimethylborane	56.9±0.8	(298)	[88/16][66/7]
C <sub>3</sub> H <sub>12</sub> B <sub>10</sub> O <sub>2</sub>	<i>o</i> -carboranecarboxylic acid	97.0±1.7	(298)	[18178-04-6] [82/20][70/14]
C <sub>3</sub> H <sub>12</sub> B <sub>10</sub> O <sub>2</sub>	<i>m</i> -carboranecarboxylic acid	97.7±0.7	(298)	[18581-81-2] [82/20][70/14]
C <sub>3</sub> H <sub>12</sub> B <sub>10</sub> O <sub>2</sub>	<i>p</i> -carboranecarboxylic acid	96.3±0.7	(298)	[23087-98-1] [82/20][70/14]
C <sub>3</sub> H <sub>14</sub> B <sub>10</sub>	methyl- <i>o</i> -carborane	63.8±0.6	(298)	[16872-10-9] [82/20][76/13]
C <sub>3</sub> H <sub>14</sub> B <sub>10</sub> O	hydroxymethyl- <i>o</i> -carborane	77.0±1.3	(298)	[19610-34-5] [82/20][76/13]
C <sub>3</sub> H <sub>14</sub> B <sub>10</sub> O	hydroxymethyl- <i>m</i> -carborane	78.3±1.3	(298)	[53257-04-8] [82/20][76/13]
C <sub>3</sub> H <sub>14</sub> B <sub>10</sub> O	hydroxymethyl- <i>p</i> -carborane	83.9±1.3	(298)	[35795-98-3] [82/20][76/13]
C <sub>4</sub> H <sub>11</sub> BO <sub>2</sub>	dihydroxy- <i>n</i> -butylborane (303–340)	69.9±0.8	(321)	BG [4426-47-5] [56/12]
C <sub>4</sub> H <sub>12</sub> B <sub>2</sub> Br <sub>4</sub> N <sub>2</sub>	dibromo(dimethylamino)borane dimer	87.4±22.2		[25928-66-9] [83/12]
(C <sub>4</sub> H <sub>12</sub> GeO)–(BF <sub>3</sub> )	trimethylmethoxygermane–boron trifluoride complex (289–306)	59.5	(297)	SG [61/9]
C <sub>4</sub> H <sub>16</sub> B <sub>10</sub>	dimethyl- <i>o</i> -carborane	65.3±0.7	(298)	[17032-21-2] [82/20][76/13]
C <sub>4</sub> H <sub>18</sub> B <sub>4</sub> N <sub>2</sub>	1,4-piperazinediyl bis(diborane(6)) (318–346)	63.9	(332)	[68/16]
(C <sub>5</sub> H <sub>5</sub> N)–(BBr <sub>3</sub> )	boron tribromide–pyridine complex (523–602)	65.8±0.2 105.5±1.1	(393)	T C [3022-54-6] [89/24] [89/24]
(C <sub>5</sub> H <sub>11</sub> N)–(BCl <sub>3</sub> )	piperidine–boron trichloride complex (448–457)	76.1	(453)	GS [60/19]
(C <sub>5</sub> H <sub>11</sub> N)–(BH <sub>3</sub> )	piperidine–borane complex (342–380)	87.8	(361)	[56/17]
C <sub>5</sub> H <sub>21</sub> B <sub>3</sub> N <sub>2</sub> S	1,2,3,3,4,4,5,5,6,6-decahydro-1,3,3,5,5-pentamethyl-2 <i>H</i> -1,3,5,2,4,6-thiadiazatriborine	57.7		[37956-18-6]
C <sub>6</sub> H <sub>12</sub> BNO <sub>3</sub>	2,8,9-trioxa-5-aza-1-boratricyclo[3.3.3.0 <sup>1,5</sup> ]undecane 111.9±0.9		(418)	C [72/27] [283-56-7] [84/14]
(C <sub>7</sub> H <sub>9</sub> N)–(BH <sub>3</sub> )	2,6-dimethylpyridine–borane complex (358–378)	83.8	(368)	T [56/15]
C <sub>7</sub> H <sub>14</sub> BNO <sub>3</sub>	2,9,10-trioxa-5-aza-1-boratricyclo[4.3.3.0 <sup>1,6</sup> ]dodecane 105.2±0.6		(390)	C [283-62-5] [84/14]
C <sub>8</sub> H <sub>16</sub> BNO <sub>3</sub>	2,10,11-trioxa-5-aza-1-boratricyclo[4.4.3.0 <sup>1,6</sup> ]tridecane 102.2±1.0		(390)	C [283-64-7] [84/14]
C <sub>8</sub> H <sub>18</sub> BNO <sub>3</sub>	2,10,11-trioxa-5-aza-1-boratricyclo[4.4.4.0 <sup>1,6</sup> ]tetradecane 97.9±1.0		(418)	C [283-65-8] [84/14]
C <sub>8</sub> H <sub>18</sub> B <sub>10</sub> O <sub>3</sub>	1,2-dicarbadodecaborane(12)-1-carboperoxoic acid 1,1-dimethyl-2-propynyl ester (329–343)	120.7±7.4		ME [146959-04-8] [99/43]
C <sub>8</sub> H <sub>18</sub> B <sub>10</sub> O <sub>3</sub>	1,7-dicarbadodecaborane(12)-1-carboperoxoic acid 1,1-dimethyl-2-propynyl ester (317–334)	80.1±6.1		ME [146959-05-9] [99/43]
C <sub>8</sub> H <sub>24</sub> B <sub>10</sub>	1-hexyl- <i>o</i> -carborane	86.2±1.4	(298)	[20740-05-0] [82/20][78/23]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
				Reference
C <sub>11</sub> H <sub>24</sub> B <sub>10</sub> O <sub>3</sub>	1,2-dicarbadodecaborane(12)-1-carboperoxoic acid 2-(1-methylethyl)-1,1-dimethyl-2-propynyl ester (345–362)	125.1±7.0		[146959-06-0]
C <sub>18</sub> H <sub>15</sub> B	triphenylboron	103.8±2.5 92.1±2.5 81.6±2.1	(360) (298)	ME TE,ME [99/43] [960-71-4] [84/4] [78/2] [82/20][67/10] [1088-01-3] [82/20][67/10] [13965-73-6] [58/8] [13703-88-3]
C <sub>18</sub> H <sub>33</sub> B	tricyclohexylboron	81.6±4.2	(298)	[66/9]
B <sub>2</sub> F <sub>4</sub>	diboron tetrafluoride (178–209.5)	35.5	(193)	[933-18-6]
B <sub>3</sub> Br <sub>3</sub> H <sub>3</sub> N <sub>3</sub>	2,4,6-tribromoborazine (342–395)	86.2±0.4	I	[13779-24-3]
B <sub>3</sub> Cl <sub>3</sub> H <sub>3</sub> N <sub>3</sub>	2,4,6-trichloroborazine (303–353) (313–357)	70.5±0.4 71.1	I	[66/9] [55/6]
B <sub>3</sub> F <sub>3</sub> H <sub>3</sub> N <sub>3</sub>	2,4,6-trifluoroborazine (273–454)	63.1±0.1	I	[66/9]
B <sub>3</sub> H <sub>12</sub> N <sub>3</sub>	hexahydroborazine (321–349)	104.6±12.6	ME	[13871-09-5]
(NH <sub>3</sub> )–(B <sub>3</sub> H <sub>7</sub> )	ammonia–triborane complex (306–328) (304–327)	71.5±0.4 71.5	ME	[59/16] [59/15]
Ba				
(C <sub>10</sub> H <sub>2</sub> BaF <sub>12</sub> O <sub>4</sub> )–(C <sub>12</sub> H <sub>24</sub> O <sub>6</sub> )	bis(1,1,1,5,5-hexafluoro-2,4-pentanedionato)barium(II)–18-crown-6 complex (412–468) (428–473)	104.9±1.3 115±2	(440) (450)	T [95/22] [93/4] [155138-07-1]
C <sub>22</sub> H <sub>38</sub> BaO <sub>4</sub>	bis(2,2,6,6-tetramethylheptane-3,5-dionato)barium(II) NA (413–473)	90.2	(443)	[94/40] [93/9]
C <sub>34</sub> H <sub>42</sub> BaCu <sub>2</sub> F <sub>24</sub> O <sub>8</sub>	tetrakis(hexafluoroisopropoxy)bis(2,2,6,6-tetramethylheptane-3,5-dionato)barium(II)dicopper(II) (383–448)	102.7	(416)	[16034-35-2] [96/7]
C <sub>56</sub> H <sub>80</sub> BaF <sub>24</sub> O <sub>12</sub> Y <sub>2</sub>	tetrakis(hexafluoroisopropoxy)tetrakis(2,2,6,6-tetramethylheptane-3,5-dionato)barium(II)diyttrium(III) (360–403)	84.8	(382)	[160669-81-8] [96/7]
Be				
C <sub>10</sub> H <sub>2</sub> BeF <sub>12</sub> O <sub>4</sub>	bis(1,1,1,5,5-hexafluoro-2,4-pentanedionato)beryllium(II) (289–349)	66.1	(319)	BG [87/20]
C <sub>10</sub> H <sub>8</sub> BeF <sub>6</sub> O <sub>4</sub>	bis(1,1,1-trifluoro-2,4-pentanedionato)beryllium(II) (354–383)	85.3±6.3 88.0±6.5 U30.5	(368) (298)	BG [87/20][88/22] [87/20] [60/17]
C <sub>10</sub> H <sub>14</sub> BeO <sub>4</sub>	bis(2,4-pentanedionato)beryllium(II) 94±1.0 95.3±2.0 82.3 91±1.4 85.3±3.5 U35.6	(298) (298) (298) (298) (298)	ME [77/18][88/2] [88/25] [88/22] C [85/5] DSC [83/10] [60/17]	
C <sub>12</sub> H <sub>18</sub> Be <sub>4</sub> O <sub>13</sub>	hexakis(aceto)-oxotetraberyllium (390–451)	115.3	(420.5)	I [19049-40-2] [87/4] [59/17]
monoclinic		115.3		
form I	(394–422)	132.6	(408)	[55/9]
form II	(426–446)	113.4	(436)	[55/9]
C <sub>20</sub> H <sub>12</sub> BeF <sub>6</sub> O <sub>4</sub>	bis(1-phenyl-4,4,4-trifluoro-1,3-butanedionato)beryllium(II) U35.8		I	[14052-07-4] [60/17]
C <sub>20</sub> H <sub>18</sub> BeO <sub>4</sub>	bis(benzoylacetone)beryllium(II) (416–438)	151.6±1.8 158.0±1.8 142.3±1.4	(427) (298) (298)	TE,ME [95/9] [95/9] C [83/20]
C <sub>22</sub> H <sub>38</sub> BeO <sub>4</sub>	bis(2,2,6,6-tetramethylheptane-3,5-dionato)beryllium			[36915-22-7]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Temperature range (K)	Method
Molecular formula/polymorph					Reference
BeF <sub>2</sub>	beryllium fluoride	84.2		BG	[88/22]
	(713–795)	236.4±2.9	(750)	TE	[7787-49-7]
		231.8±1.7	(755)	MS	[65/20]
Bi					[65/20]
C <sub>15</sub> H <sub>30</sub> BiN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (N,N-diethyldithiocarbamate)bismuth(III)				[20673-31-8]
		213±3	(298)		[94/31]
C <sub>18</sub> H <sub>15</sub> Bi	triphenylbismuth	110.9±8.4	(298)		[603-33-8]
C <sub>21</sub> H <sub>42</sub> BiN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (dipropylidithiocarbamate)bismuth(III)	285.2±5.0		DSC,E	[82/20][79/22]
C <sub>27</sub> H <sub>54</sub> BiN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (N,N-dibutylidithiocarbamate)bismuth(III)	202±3	(298)		[57407-97-3]
C <sub>27</sub> H <sub>54</sub> BiN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (N,N-diisobutylidithiocarbamate)bismuth(III)	147±3	(298)	DSC,E	[34410-99-6]
BiCl <sub>3</sub>	bismuth (III) chloride	124.7		ME	[94/31]
	(371–468)	118.8±0.4	(420)	ME	[7787-60-2]
					[66/8][59/11]
					[59/11]
Ca					
C <sub>22</sub> H <sub>38</sub> CaO <sub>4</sub>	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)calcium(II)	72.0		GS	[3618-89-0]
					[90/15]
Cd					
C <sub>4</sub> H <sub>16</sub> CdCl <sub>2</sub> N <sub>8</sub> S <sub>4</sub>	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)cadmium(II)				[28813-21-0]
	(377–405)	75±20			[70/11]
C <sub>10</sub> H <sub>14</sub> CdCl <sub>2</sub> N <sub>6</sub> O <sub>2</sub>	[cadmium(1-methylcytosine) <sub>2</sub> Cl <sub>2</sub> ]				
	(483–503)	135.3±20	(493)	ME	[84/12]
		145±20	(298)		[84/12]
C <sub>10</sub> H <sub>14</sub> CdO <sub>4</sub>	<i>bis</i> (2,4-pentanedionato)cadmium(II)				[14689-45-3]
	(438–448)	144.9±22	(443)	ME	[84/12]
		154±22	(298)		[84/12]
C <sub>10</sub> H <sub>20</sub> CdN <sub>2</sub> S <sub>4</sub>	<i>bis</i> (diethyldithiocarbamate)cadmium(II)				[14239-68-0]
	(433–469)	133.2	(451)		[87/4]
C <sub>14</sub> H <sub>28</sub> CdN <sub>2</sub> S <sub>4</sub>	<i>bis</i> (dipropylidithiocarbamate)cadmium(II)				[55519-99-8]
		199±1	(298)	DSC,E	[92/19]
C <sub>18</sub> H <sub>12</sub> CdN <sub>2</sub> O <sub>2</sub>	<i>bis</i> (8-hydroxyquinolinato)cadmium(II)				[14245-29-5]
	(438–448)	201.7±7.5	(298)	ME	[94/16]
		144.9±22	(443)	ME	[84/12]
		154±22	(298)		[84/12]
C <sub>18</sub> H <sub>36</sub> CdN <sub>2</sub> S <sub>4</sub>	<i>bis</i> (dibutylidithiocarbamate)cadmium(II)				[14566-86-0]
		123±3	(298)	DSC,E	[91/15]
C <sub>18</sub> H <sub>36</sub> CdN <sub>2</sub> S <sub>4</sub>	<i>bis</i> (diisobutylidithiocarbamate)cadmium(II)				[69090-75-1]
		281±2	(298)	DSC,E	[94/33]
C <sub>20</sub> H <sub>16</sub> CdN <sub>2</sub> O <sub>2</sub>	<i>bis</i> (8-hydroxy-2-methylquinolinato)cadmium(II)				[15685-78-6]
	(537–554)	190.9±7.3	(546)	ME	[98/8]
		203.3±7.3	(298)		[98/8]
C <sub>44</sub> H <sub>28</sub> CdN <sub>4</sub>	5,10,15,20-tetraphenylporphine cadmium(II)				[14977-07-2]
		222±6		GS	[00/36]
Ce					
C <sub>15</sub> H <sub>15</sub> Ce	<i>tris</i> (cyclopentadienyl)cerium				[1298-53-9]
	(528–653)	104.6±2.1			[73/31]
CeBr <sub>3</sub>	cerium(III) bromide				[14457-87-5]
	(887–1003)	300±10	(298)	TE	[00/19]
CeCl <sub>3</sub>	cerium(III) chloride				[7790-86-5]
	(955–1070)	331±5	(298)	TE	[00/19]
CeI <sub>3</sub>	cerium(III) iodide				[7790-87-6]
	(910–1031)	295±10	(298)	TE	[00/19]
Cf					
(C <sub>15</sub> H <sub>3</sub> CfF <sub>18</sub> O <sub>6</sub> ) <sub>2</sub> (C <sub>6</sub> H <sub>14</sub> OS)	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)californium-249–dipropyl sulfoxide (1:2) complex				[123611-97-2]
	(402–434)	93.6±6.0		GS,TRM	[89/31]
(C <sub>15</sub> H <sub>3</sub> CfF <sub>18</sub> O <sub>6</sub> ) <sub>2</sub> (C <sub>12</sub> H <sub>27</sub> OP)	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)californium-249–tributylphosphine oxide (1:2) complex				[123628-36-4]
	(431–485)	130.6±1.9		GS,TRM	[89/31]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Reference
(C <sub>15</sub> H <sub>3</sub> CfF <sub>18</sub> O <sub>6</sub> )–2(C <sub>12</sub> H <sub>27</sub> O <sub>4</sub> P)	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)californium-249–tributylphosphate (1:2) complex (413–451)	133.0±6.1		[123712-43-6] GS,TRM [89/31]
Cl				
HCl	hydrogen chloride (121–133) (134–150)	19.7 19.6	(127) (142)	[90/33] [90/33]
Co				
C <sub>4</sub> H <sub>16</sub> Cl <sub>2</sub> CoN <sub>8</sub> S <sub>4</sub>	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)cobalt(II) (356–382)	129±20		[22738-43-8] [70/11]
C <sub>8</sub> Co <sub>2</sub> O <sub>8</sub>	octacarbonyldicobalt (264–278) (288–315)	84.3±0.5 103.8 65.2±3.3	(271) (301.5) (298)	TE [95/36] [87/4][68/15] [82/20][75/26]
C <sub>8</sub> H <sub>10</sub> Cl <sub>2</sub> CoN <sub>6</sub> O <sub>2</sub>	[cobalt(cytosine) <sub>2</sub> Cl <sub>2</sub> ] (483–523)	151.8±14 162±14	(503) (298)	EM [73/26] [74543-51-4] ME [84/12] [84/12]
C <sub>9</sub> CoMnO <sub>9</sub>	nonacarbonylcobaltmanganese	85±2 72±2	(308) (298)	C [98/33] [98/33]
C <sub>9</sub> CoO <sub>9</sub> Re	nonacarbonylcobaltrhenium	94±4 83±4	(313) (298)	C [98/33] [98/33]
C <sub>10</sub> BrCo <sub>3</sub> O <sub>9</sub>	(bromomethylidyne)tricobaltenneacarbonyl	99.6±1.7	(298)	[19439-14-6] [82/20][75/26]
C <sub>10</sub> ClCo <sub>3</sub> O <sub>9</sub>	(chloromethylidyne)tricobaltenneacarbonyl	117.6±2.5	(298)	[13682-02-5] [82/20][75/26]
C <sub>10</sub> H <sub>8</sub> Cl <sub>4</sub> CoN <sub>2</sub>	[cobalt(2-chloropyridine) <sub>2</sub> Cl <sub>2</sub> ] (345–365)	101.2±6.7	(355)	DSC [14361-73-0] [82/18]
C <sub>10</sub> H <sub>8</sub> Cl <sub>4</sub> CoN <sub>2</sub>	[cobalt(3-chloropyridine) <sub>2</sub> Cl <sub>2</sub> ] (345–365)	77.0±4.2	(355)	DSC [14361-78-5] [82/18]
C <sub>10</sub> H <sub>10</sub> Co	dicyclopentadienyl cobalt	72.1±0.1 70.3±4.2		[1277-43-6] [88/3] [82/20][75/23]
C <sub>10</sub> H <sub>14</sub> CoO <sub>4</sub>	<i>bis</i> (2,4-pentanedionato)cobalt(II) (433–463) (322–371)	149 130.1±6.3 118.7±2.2 81.2 U62.8		TGA [00/35] ME [90/21] [85/5] [70/10] [60/17]
C <sub>12</sub> Co <sub>4</sub> O <sub>12</sub>	tetracobaltdodecacarbonyl	96.2±4.2	(298)	[17786-31-1] [82/20][74/26]
C <sub>12</sub> H <sub>14</sub> Cl <sub>2</sub> CoN <sub>2</sub>	[cobalt(2-methylpyridine) <sub>2</sub> Cl <sub>2</sub> ] (345–365)	86.6±3.8	(355)	DSC [13869-67-5] [82/18]
C <sub>14</sub> H <sub>10</sub> Br <sub>2</sub> CoN <sub>2</sub> S <sub>2</sub>	[cobalt(benzothiazole) <sub>2</sub> Br <sub>2</sub> ] (381–399)	127.7±4.1	(390)	DSC [21422-14-0] [73/28]
C <sub>15</sub> H <sub>3</sub> CoF <sub>18</sub> O <sub>6</sub>	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)cobalt(III) (333–363)	73		TGA [16702-37-7] [00/35]
C <sub>15</sub> H <sub>12</sub> CoF <sub>9</sub> O <sub>6</sub>	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)cobalt(III) (373–403)	119		TGA [16827-64-8] [00/35]
		114±4.0	(298)	[88/1] GS [85/16]
		108.8±0.4		[21679-46-9] [00/35]
C <sub>15</sub> H <sub>21</sub> CoO <sub>6</sub>	<i>tris</i> (2,4-pentanedionato)cobalt(III) (433–463)	138 NA		TGA [94/34] [90/21]
		134.6±4.0	(298)	[87/13] [71/17]
		142.6±6.9	(471)	[70/10] [64/4]
		86.3		[61/8]
		107.1	(390)	[13963-60-5]
		74.9±4.6		
		U13.0		
C <sub>15</sub> H <sub>30</sub> CoN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (diethyldithiocarbamato)cobalt(III)			

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
C <sub>16</sub> H <sub>14</sub> Br <sub>2</sub> CoN <sub>2</sub> O <sub>2</sub>	(448–587) [cobalt(2-methylbenzoxazole) <sub>2</sub> Br <sub>2</sub> ] (345–390)	95±6 111.1±4.2 92.4±2.5	(518) (368) (368)	[79/20] [22974-96-5] [82/18][74/27]	
C <sub>16</sub> H <sub>14</sub> Cl <sub>2</sub> CoN <sub>2</sub> O <sub>2</sub>	[cobalt(2-methylbenzoxazole) <sub>2</sub> Cl <sub>2</sub> ] (345–390)	92.4±2.5	(368)	DSC	[52657-96-2] [82/18][74/27]
C <sub>16</sub> H <sub>14</sub> Br <sub>2</sub> CoN <sub>2</sub> S <sub>2</sub>	[cobalt(2-methylbenzothiazole) <sub>2</sub> Br <sub>2</sub> ] (335–354)	115.1±4.1	(345)	DSC	[26225-02-5] [73/28]
C <sub>16</sub> H <sub>14</sub> Cl <sub>2</sub> CoN <sub>2</sub> S <sub>2</sub>	[cobalt(2-methylbenzothiazole) <sub>2</sub> Cl <sub>2</sub> ] (332–356)	122.6±1.2	(345)	DSC	[26225-01-4] [73/28]
C <sub>18</sub> H <sub>12</sub> CoN <sub>2</sub> O <sub>2</sub>	bis(8-hydroxyquinolinato)cobalt(II)  (533–569)	205.3±4.0 185.7±9 200±10	(298) (551) (298)	ME ME	[13978-88-6] [94/16] [84/12] [84/12]
C <sub>18</sub> H <sub>14</sub> CoN <sub>4</sub>	dibenzotetra-aza-annulene cobalt(II) complex  178.2±16.7		(360)		[41283-94-7] [82/25]
C <sub>18</sub> H <sub>18</sub> Br <sub>2</sub> CoN <sub>2</sub> O <sub>2</sub>	[cobalt(2,5-dimethylbenzoxazole) <sub>2</sub> Br <sub>2</sub> ] (345–390)	95.4±4.6	(368)	DSC	[52230-48-5] [82/18][74/27]
C <sub>18</sub> H <sub>18</sub> Cl <sub>2</sub> CoN <sub>2</sub> O <sub>2</sub>	[cobalt(2,5-dimethylbenzoxazole) <sub>2</sub> Cl <sub>2</sub> ] (345–390)	104.6±5.8	(368)	DSC	[52230-47-4] [82/18][74/27]
C <sub>20</sub> H <sub>16</sub> CoN <sub>2</sub> O <sub>2</sub>	bis(8-hydroxy-2-methylquinolinate)cobalt(II) (457–473)	196.1±5.9 204.4±5.9	(465) (298)	ME	[17992-18-6] [98/8] [98/8]
C <sub>22</sub> H <sub>38</sub> CoO <sub>4</sub>	bis(2,2,6,6-tetramethyl-3,5-heptanedionato)cobalt(II) (433–463)	143		TGA	[13986-53-3] [00/35]
C <sub>24</sub> H <sub>12</sub> CoF <sub>9</sub> O <sub>6</sub> S <sub>3</sub>	tris(1-(2-thenoyl)-4,4,4-trifluoro-1,3-butanedione)cobalt(III)  45.6				[41875-84-7] [61/8]
C <sub>24</sub> H <sub>12</sub> CoF <sub>9</sub> O <sub>9</sub>	tris(2-furoyltrifluoroacetonato)cobalt(III)  35.6				[64137-83-3] [61/8]
C <sub>30</sub> H <sub>18</sub> CoF <sub>9</sub> O <sub>6</sub>	tris(1-phenyl-4,4,4-trifluoro-1,3-butanedionato)cobalt(III)  51.0				[31125-84-5] [61/8]
C <sub>30</sub> H <sub>27</sub> CoO <sub>6</sub>	tris(1-phenyl-1,3-butanedionato)cobalt(III)  39.0				[14524-55-1] [61/8]
C <sub>32</sub> H <sub>16</sub> CoN <sub>8</sub>	cobalt (II) phthalocyanine  183.7±13.8			ME	[3317-67-7] [70/7]
C <sub>32</sub> H <sub>46</sub> CoN <sub>2</sub> O <sub>4</sub>	bis(2,2,6,6-tetramethyl-3,5-heptanedionato)(2,2'-bipyridyl)cobalt(II)  126±4.0 130.3 124.4			B UV/Vis MEM	[18347-53-8] [96/24] [96/24] [96/24]
C <sub>33</sub> H <sub>57</sub> CoO <sub>6</sub>	tris(2,2,6,6-tetramethyl-3,5-heptanedionato)cobalt(III) (433–463)	132 126±3.0	(298)	TGA	[14877-41-3] [00/35] [88/1]
CoBr <sub>2</sub>	cobalt(II) bromide (764–911)	207±4.0 216±1.0	(802) (298)	TE	[7789-43-7] [97/20] [97/20]
Cr	chromium hexacarbonyl				
C <sub>6</sub> CrO <sub>6</sub>	(266–272) (323–391) (288–423)	65.7 68.5±1.1 68.5 68.9±2 70.0±2	(269) (355.5) (298) (298)	TE	[13007-92-6] [95/36] [93/28] [87/4] [84/17]
	(240–280)	71.6±1.7 69.5 72.0±4.2	(260) (298) (298)	C ME C	[83/20] [80/34][79/19] [75/20] [82/20][75/24]
	(274–301) (319–411)	71.5±0.8 69.3 71.9	(288)	BG	[66/17] [52/7] [35/2]
	(308–408)	63.6	(358)	MM	[34/3]
C <sub>8</sub> H <sub>3</sub> CrNO <sub>5</sub> S	thiazole(pentacarbonyl)chromium				[55293-31-7]
	(270–301)	102.0±2.7	(286)	ME	[79/19]
C <sub>8</sub> H <sub>4</sub> CrN <sub>2</sub> O <sub>5</sub>	pyrazole(pentacarbonyl)chromium				[71127-65-6]
	(270–303)	88.4±1.8	(287)	ME	[79/19]
C <sub>8</sub> H <sub>9</sub> CrNO <sub>5</sub>	trimethylamine(pentacarbonyl)chromium				[15228-26-9]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)		CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method	Reference
C <sub>8</sub> H <sub>9</sub> CrO <sub>5</sub> P	(248–293) trimethylphosphine(pentacarbonyl)chromium	80.2±0.7 91.2±1.6	(271)	ME	[80/34] [26555-09-9]
C <sub>8</sub> H <sub>12</sub> CrMoO <sub>8</sub>	chromium molybdenum tetraacetate	165.0±8.4		ME	[80/34] [71561-64-3] [82/20]
C <sub>8</sub> H <sub>12</sub> Cr <sub>2</sub> O <sub>8</sub>	tetra- $\mu$ -acetatodichromium(II)	299.6±10 313.8±27.0 145	(335) (298)	ME,TE	[15020-15-2] [84/20] [82/20] [79/23]
C <sub>9</sub> H <sub>4</sub> CrN <sub>2</sub> O <sub>5</sub>	pyrazine(pentacarbonyl)chromium	99.7		ME	[66179-02-0] [79/19]
C <sub>9</sub> H <sub>5</sub> ClCrO <sub>3</sub>	chlorobenzenechromium tricarbonyl	102.5±4.2	(298)		[12082-03-0] [82/20][75/20]
C <sub>9</sub> H <sub>6</sub> CrO <sub>3</sub>	benzene chromium tricarbonyl	91.2 U58.6	(298)	C	[12082-08-5] [75/20] [61/4][73/29]
C <sub>10</sub> H <sub>5</sub> CrNO <sub>5</sub>	(364–370) pyridine(pentacarbonyl)chromium	97.9		TE	[59/6][73/29] [14740-77-3]
C <sub>10</sub> H <sub>8</sub> CrO <sub>3</sub>	(294–317) cycloheptatriene chromium tricarbonyl	103.2±1.8	(306)	ME	[79/19] [12125-72-3]
C <sub>10</sub> H <sub>8</sub> CrO <sub>3</sub>	94.1	(298)	C	[75/20]	
C <sub>10</sub> H <sub>8</sub> CrO <sub>3</sub>	$\eta^6$ -toluene(tricarbonyl)chromium	93.0±2.0 94.6±4.2	(298) (298)	C	[12125-87-0] [84/17] [82/20][75/20]
C <sub>10</sub> H <sub>8</sub> CrO <sub>4</sub>	$\eta^6$ -anisole(tricarbonyl)chromium	104.2±2.0	(298)	C	[12116-44-8] [84/17]
C <sub>10</sub> H <sub>10</sub> Cr	dicyclopentadienyl chromium	71.0 62.8±4.2 69.9±1.7	(298) (298) (298)		[1271-24-5] [84/24] [82/20][75/23] [77/24]
C <sub>10</sub> H <sub>14</sub> CrO <sub>4</sub>	bis(2,4-pentanedionato)chromium(II)	129.8±8.7	(298)	ME	[14024-50-1] [90/21]
C <sub>10</sub> H <sub>14</sub> CrO <sub>4</sub>	(330–370)	111	(439)	T	[81/15]
C <sub>10</sub> H <sub>11</sub> CrNO <sub>5</sub>	piperidine(pentacarbonyl)chromium	93.5±1.9	(282)	ME	[15710-39-1] [79/19]
C <sub>11</sub> H <sub>8</sub> CrO <sub>4</sub>	(265–298) norbornadienechromium tetracarbonyl	89.0±4.0	(298)		[12146-36-0] [82/20][77/22]
C <sub>11</sub> H <sub>8</sub> CrO <sub>4</sub>	89.0±4.0				[12153-11-6]
C <sub>11</sub> H <sub>8</sub> CrO <sub>4</sub>	$\eta^6$ -acetophenone(tricarbonyl)chromium	107.0±0.6	(298)	C	[84/17]
C <sub>11</sub> H <sub>8</sub> CrO <sub>5</sub>	$\eta^6$ -methyl benzoate(tricarbonyl)chromium	114.0±5.0	(298)	C	[12125-87-0] [84/17]
C <sub>11</sub> H <sub>11</sub> CrNO <sub>3</sub>	$\eta^6$ -N,N-dimethylaniline(tricarbonyl)chromium	118.4±10	(298)	C	[12109-10-3] [84/17]
C <sub>12</sub> H <sub>12</sub> Cr	dibenzenechromium	89.4 78.2±6.3 82.0±2.1 90.6±0.3 78.2±6.2	(343) (298) (298) (298)		[1271-54-1] [87/4] [82/20][73/29] [73/22] [69/21] [58/13]
C <sub>12</sub> H <sub>12</sub> CrO <sub>3</sub>	mesitylene chromium tricarbonyl	108.4 U64.4	(298)	C	[12129-67-8] [75/20] [61/5][77/21]
C <sub>12</sub> H <sub>12</sub> CrO <sub>3</sub>	(1,2,4-trimethylbenzene) chromium tricarbonyl	U33.5			[32913-41-0] [61/5][77/21]
C <sub>13</sub> H <sub>8</sub> CrO <sub>3</sub>	(1,2,3,4,4a,8a-h-naphthalene)tricarbonyl chromium	107±3	(298)	C	[12110-37-1] [79/16]
C <sub>15</sub> H <sub>3</sub> F <sub>18</sub> CrO <sub>6</sub>	tris(1,1,1,5,5-hexafluoro-2,4-pentanedionato)chromium(III)	46		TGA	[14592-80-4] [00/35]
C <sub>15</sub> H <sub>12</sub> CrF <sub>9</sub> O <sub>6</sub>	(333–363)	112±4.0	(298)		[87/12]
C <sub>15</sub> H <sub>12</sub> CrF <sub>9</sub> O <sub>6</sub>	(333–360)	123.0±1.3	(335)		[72/17]
C <sub>15</sub> H <sub>12</sub> CrF <sub>9</sub> O <sub>6</sub>	tris(1,1,1-trifluoro-2,4-pentanedionato)chromium(III)	71		TGA	[14592-89-2] [00/35]
C <sub>15</sub> H <sub>12</sub> CrF <sub>9</sub> O <sub>6</sub>	(373–403)	182±4.0	(426)	C	[87/12]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound				CAS registry number
		Temperature range (K)	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	
Molecular formula/polymorph					Reference
$\text{C}_{15}\text{H}_{18}\text{CrO}_3$	(373–438) hexamethylbenzene chromium tricarbonyl	117±4.0	(298)		[87/12]
		115.1±0.8		GS	[85/16]
		112.5±4.8			[78/29]
		53.6	(447)		[77/25]
		108.8±1.3	(395)		[72/17]
	tris(2,4-pentanedionato)chromium(III)	123.0±4.0	(298)	C	[12088-11-8]
		91		TGA	[75/20][77/22]
		126.8±4.2	(298)	ME	[00/35]
		113.0±4.8		BG	[90/21]
		132.1±1.9	(298)	C	[88/22][87/21]
$\text{C}_{15}\text{H}_{21}\text{CrO}_6$	(413–443) bis( $\eta^6$ -hexamethylbenzene)chromium	28.9	(463)		[85/5]
		112.1	(390)		[77/25]
		40.2±1.7	(378)		[70/10]
		110.9±0.8	(298)	HSA	[72/17]
		123±3.0	(298)	ME	[70/9][70/17]
	tris(1-phenyl-1,3-butanedionato)chromium(III)	104±1	(298)	C	[67/18][88/2]
		105.0±10			[67/11]
		170.2±6.8	(336)	ME	[1274-07-3]
		150.0±4.0	(298)		[79/16]
		119±4	(298)	C	[33085-81-3]
$\text{C}_{30}\text{H}_{27}\text{CrO}_6$	(324–347) bis(naphthalene)chromium	186±2	(298)		[14917-12-5]
		37.7±0.8	(338)		[80/34]
		37.7±0.8	(298)		[67634-82-6]
		133±2	(298)		[82/20][81/18]
		85		TGA	[12156-66-0]
	(413–443) tris(2,2,6,6-tetramethyl-3,5-heptanedionato)chromium(III)	195.6	(298)		[79/16]
		193.1	(298)		[16432-36-3]
		193.1	(298)		[87/12]
		191.1	(298)		[87/12]
		298.7	(298)	65	[13478-28-9]
$\text{Cs}$	$\text{CsH}_9\text{CsO}_2$ cesium pivalate	163.5±7.2			[56/19]
		195.6	(298)	GS	[20442-70-0]
		193.1	(298)	T	[98/31]
		193.1	(298)	T	[85/15][98/4]
		191.1	(298)	MS	[84/29][98/4]
	$\text{CsI}$ cesium iodide	195.6	(298)		[84/28][98/4]
		193.1	(298)		[7789-17-5]
		193.1	(298)		[98/4]
		191.1	(298)		[85/15][98/4]
		191.1	(298)		[84/29][98/4]
$\text{Cu}$	$\text{C}_6\text{H}_{12}\text{CuN}_2\text{S}_4$ bis(dimethylthiocarbamato) copper complex	156.0±0.3	(298)	C	[137-29-1]
		147.4±0.8	(458)		[95/21]
		149.0±2.5		GC	[87/4][78/12]
		106.1±0.9	(298)	ME,	[76/21]
		93.1±0.8	(298)	TE,	[24411-13-0]
	$\text{C}_8\text{H}_{12}\text{Cu}_2\text{O}_8$ tetrakis(acetato)dicopper(II)	108±6	(298)	ME	[90/2]
		112		TGA	[14221-10-4]
		113.3±2.4	(350)	TE	[88/7]
		115.9±2.4	(298)		[14324-82-4]
		114.4±1.6	(350)	ME	[95/4]
$\text{C}_{10}\text{H}_2\text{CuF}_{12}\text{O}_4$	$\text{C}_{10}\text{H}_8\text{CuF}_6\text{O}_4$ bis(1,1,1-trifluoro-2,4-pentanedionato)copper(II)	110.9±0.8	(298)	C	[95/4]
		112		TGA	[00/35]
		113.3±2.4	(350)	TE	[95/4]
		115.9±2.4	(298)		[95/4]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
$\text{C}_{10}\text{H}_{14}\text{CuO}_4$	<i>bis</i> (2,4-pentanedionato)copper(II)	117.0±1.6	(298)		[95/4]
		112±3.0	(298)	C	[88/7]
		110.0±0.8		GS	[85/16]
		U50.6			[60/17]
					[13395-16-9]
		120		TGA	[00/35]
		122.5±1.2	(387)	TE	[95/4]
		122.5±1.2	(298)		[95/4]
		122.6±0.7	(387)	ME	[95/4]
		127.1±1.2	(298)		[95/4]
		122.3±1.1	(393)	ME	[95/4]
		127.0±1.1	(298)		[95/4]
		116.6±2.0	(298)	C	[94/7]
		115.1±2.1	(298)		[91/17]
		142.6±6.9	(471)	DSC	[87/12]
		107.1±5.7	(492)		[87/13]
		127.5±3.2	(298)		[85/5]
		154±22	(298)		[84/12]
$\text{C}_{10}\text{H}_{20}\text{CuN}_2\text{S}_4$	<i>bis</i> (diethyldithiocarbamate)copper(II)	109.9±3.4	(298)	C	[84/11]
		57.1		TE	[81/13]
		109.6			[72/24]
		106.1		TG	[71/17]
		109±6	(400)		[70/10]
		57.3		DSC	[71/18]
		62.8			[62/8]
					[13681-87-3]
		162.6±5	(298)		[89/10]
$\text{C}_{12}\text{H}_{12}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluorohexane-2,4-dione)copper(II)	149.1±0.4	(442.5)		[87/4][78/12]
		103.8±2.4			[79/20]
		116.2±1.3			[79/14]
		149.0±2.5			[76/21]
		87±1.7		I	[69/15]
					[30133-85-8]
		119.1±1.7	(298)	ME	[98/32]
$\text{C}_{12}\text{H}_{18}\text{CuO}_4$	<i>bis</i> (3-methyl-2,4-pentanedionato)copper(II)	130.7±1	(396.7)	ME	[14781-49-8]
		135.6±1	(298)		[92/8]
		132.7±2.5	(298)	C	[92/8]
$\text{C}_{14}\text{H}_{16}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluoro-5-methylhexane-2,4-dione)copper(II)	122.4±0.9	(298)	ME	[33896-35-4]
$\text{C}_{14}\text{H}_{28}\text{CuN}_2\text{S}_4$	<i>bis</i> (dipropylthiocarbamate)copper complex	158.6±5	(298)		[14354-08-6]
		118.4±3.3			[89/10]
					[78/12]
$\text{C}_{14}\text{H}_{28}\text{CuN}_2\text{S}_4$	<i>bis</i> (diisopropylthiocarbamate)copper complex	129.5±2.9	(452.5)		[14354-07-5]
$\text{C}_{16}\text{H}_8\text{CuF}_6\text{O}_6$	<i>bis</i> (4,4,4-trifluoro-1-(2-furanyl)butane-1,3-dione)copper(II)	161.1±2.1	(298)	ME	[87/4][78/12]
$\text{C}_{16}\text{H}_{20}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)copper(II)	120.2±1.0	(298)	ME	[13928-10-4]
		(353–379)	102±3	(366)	[98/32]
		(381–443)	76.5±2 (liq)	(412)	[93/4]
$\text{C}_{16}\text{H}_{20}\text{CuF}_6\text{O}_4$	<i>bis</i> (1,1,1-trifluoro-5-methylheptane-2,4-dione)copper(II)	122.5±0.9	(298)	ME	[93/4]
( $\text{C}_{16}\text{H}_{20}\text{F}_6\text{O}_4\text{Cu}$ ) ( $\text{C}_{10}\text{H}_{20}\text{O}_5$ )	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)copper(II)-15-crown-5 complex				[220869-88-5]
$\text{C}_{18}\text{H}_{12}\text{CuN}_2\text{O}_2$	<i>bis</i> (8-hydroxyquinolinato)copper(II)	80.2±2 (liq)	(405)	T	[98/32]
		168.7±7.3	(298)	ME	[10380-26-6]
		160.3±3	(491)	ME	[94/16]
		170±3	(298)		[84/12]
$\text{C}_{18}\text{H}_{14}\text{CuN}_4$	dibenzotetra-aza-annulene copper(II) complex				[41283-96-9]
	(493–553)	99.7±8.7	(523)	T	[83/29]
$\text{C}_{18}\text{H}_{30}\text{CuO}_4$	<i>bis</i> (2,2-dimethylheptane-3,5-dionato)copper(II)				[15321-96-7]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	$(T_m/\text{K})$	CAS registry number	
				Method	Reference
	(344–364)	125.0±1.3	(354)	TE	[95/4]
		127.8±1.3	(298)		[95/4]
	(344–364)	125.1±0.5	(354)	ME	[95/4]
		127.9±0.5	(298)		[95/4]
		122.8±1.7	(298)		[84/11]
C <sub>18</sub> H <sub>30</sub> CuO <sub>4</sub>	<i>bis</i> (2,6-dimethylheptane-3,5-dionato)copper(II)				[17653-77-9]
		118.0±347	(298)		[84/11]
C <sub>20</sub> H <sub>12</sub> CuF <sub>6</sub> O <sub>4</sub>	<i>bis</i> (4,4,4-trifluoro-1-phenylbutane-1,3-dione)copper(II)				[14126-89-7]
		172.1±3.1	(298)	ME	[98/32]
C <sub>20</sub> H <sub>16</sub> CuN <sub>2</sub> O <sub>2</sub>	<i>bis</i> (8-hydroxy-2-methylquinolinate)copper(II)				[14522-43-1]
	(402–419)	166.5±3.4	(410)	ME	[98/8]
		172.1±3.4	(298)		[98/8]
C <sub>20</sub> H <sub>18</sub> CuO <sub>4</sub>	<i>bis</i> (1-phenylbutane-1,3-dionato)copper(II)				[14128-84-8]
	(429–450)	152.2±1.7	(439)	TE	[95/4]
		159.3±1.7	(298)		[95/4]
	(429–450)	152.2±1.9	(439)	ME	[95/4]
		159.3±1.9	(298)		[95/4]
		160±4	(298)	C	[79/21]
C <sub>20</sub> H <sub>20</sub> CuF <sub>14</sub> O <sub>4</sub>	<i>bis</i> (1,1,1,2,2,3,3-hetafluoro-7,7-dimethyloctane-4,6-dionato)copper(II)				[38926-19-1]
		122.8±0.7	(298)	ME	[98/32]
C <sub>20</sub> H <sub>34</sub> CuO <sub>4</sub>	<i>bis</i> (2,2,6-trimethylheptane-3,5-dionato)copper(II)				[141752-16-3]
	(346–362)	127.4±0.7	(354)	ME	[95/4]
		130.2±0.7	(298)		[95/4]
	(346–362)	127.8±1.5	(354)	TE	[95/4]
		130.6±1.5	(298)		[95/4]
		129.0±1.3	(351)	ME	[95/4]
		131.7±1.3	(298)		[95/4]
		126.4±1.1	(298)		[84/11]
C <sub>22</sub> H <sub>24</sub> CuN <sub>2</sub> O <sub>2</sub>	<i>bis</i> [(4-phenylimino-2-pentanoato)]copper(II)				[15214-38-7]
		128.1±0.8	(298)	ME, TE	[90/2]
C <sub>22</sub> H <sub>38</sub> CuO <sub>4</sub>	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)copper(II)				[14040-05-2]
	(345–377)	127.6±0.4	(361)	TE	[01/6]
	(335–366)	127.2±1.7	(351)	TE	[01/6]
	(433–463)	120		TGA	[00/35]
	(400–430)	74.8		TGA,DTA	[96/29]
	(392–415)	100	(404)	T	[96/4]
		124.5±0.8	(372)	ME	[95/4]
		129.1±0.8	(298)		[95/4]
	(362–452)	124.6	(407)		[93/9]
	(418–473)	123.6	(445)		[92/18]
		105.9		GS	[90/15]
		111.6			[88/23][93/9]
		122.8±6.5	(298)	C	[84/11]
		112		C	[84/11]
C <sub>28</sub> H <sub>16</sub> CuF <sub>6</sub> O <sub>4</sub>	<i>bis</i> (4,4,4-trifluoro-1-(2-naphthalenyl)butane-1,3-dione)copper(II)				[30983-56-3]
		208.4.1±4.9	(298)	ME	[98/32]
C <sub>32</sub> H <sub>16</sub> CuN <sub>8</sub>	copper(II) $\alpha$ -phthalocyanine				[95/35]
C <sub>32</sub> H <sub>16</sub> CuN <sub>8</sub>	copper(II) $\beta$ -phthalocyanine				[147-14-8]
	(618–713)	231.8±2.1		ME	[00/30]
		211.1		TGA	[95/35]
	(657–863)	266.1			[69/23]
	(657–722)	266.1±5.1		ME	[65/15][70/7]
C <sub>39</sub> H <sub>59</sub> F <sub>12</sub> O <sub>8</sub> CuY	<i>bis</i> (hexafluoroisopropoxy) <i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)copper(II)yttrium(III)				[160364-36-3]
	(370–410)	81.2	(390)		[96/7]
C <sub>44</sub> H <sub>28</sub> CuN <sub>4</sub>	5,10,15,20-tetraphenylporphine copper(II)				[14172-91-9]
		160±5		GS	[00/36]
Dy					
C <sub>15</sub> H <sub>15</sub> Dy	<i>tris</i> (cyclopentadienyl)dysprosium(III)				[12088-04-9]
		105.0±2.1			[73/32]
C <sub>30</sub> H <sub>30</sub> DyF <sub>21</sub> O <sub>6</sub>	<i>tris</i> (1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)dysprosium(III)				[18232-98-3]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Temperature range (K)	Method
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Dy}$	(370–385)	156.5±2.9			[71/25]
	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)dysprosium(III)				[15522-69-7]
	(373–388)	171.5	(380)	ME	[81/21]
	(388–413)	152.7	(400)	ME	[81/21]
$\text{DyBr}_3$	(410–456)	133.5	(433)	BG	[69/19]
	dysprosium tribromide				[14456-48-5]
$\text{DyCl}_3$	(878–1151)	289±6.0	(298)	TE	[99/20]
	dysprosium trichloride				[10025-74-8]
$\text{DyI}_3$	(924–1214)	283±5.0	(298)	TE	[99/20]
	dysprosium triiodide				[15474-63-2]
$\text{Er}$	(889–1157)	282±4.0	(298)	TE	[99/20]
$\text{C}_{15}\text{H}_{12}\text{ErF}_9\text{O}_6$	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)erbium(III)				[70332-27-3]
	(473–494)	79.5±11.5	(484)		[96/27]
$\text{C}_{15}\text{H}_{15}\text{Er}$	<i>tris</i> (cyclopentadienyl)erbium(III)				[39330-74-0]
	(503–558)	97.2±3.2	(530)		[96/27]
$\text{C}_{24}\text{H}_{33}\text{Er}$	97.1±3.3				[73/32]
	<i>tris</i> [(1,2,3,4,5- $\eta$ )-1-(1-methylethyl)-2,4-cyclopentadien-1-yl]erbium(III)				[130521-76-5]
$\text{C}_{30}\text{H}_{30}\text{ErF}_{21}\text{O}_6$	(464–502)	78.6±3.0	(483)		[96/27]
	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)erbium(III)				[17978-75-5]
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Er}$	(349–362)	154.8±4.2		ME	[71/25]
	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)erbium(III)				[14319-09-6]
$\text{Eu}$	(471–505)	130.8±2.2	(298)	DSC	[99/33]
		93.9±4.6	(488)		[96/27]
	(363–418)	154.0	(390)	ME	[81/21]
	(358–381)	149.3±1.7		ME	[71/25]
	(410–454)	133.2	(432)	BG	[69/19]
$\text{Fe}$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)europerium(III)				[15522-71-1]
	(363–433)	179.9	(398)	ME	[81/21]
	(373–423)	180.0		ME	[79/30]
	(430–466)	165.4	(448)	BG	[69/19]
$\text{C}_2\text{FeN}_2\text{O}_4$	dicarbonyldinitrosyl iron				[13682-74-1]
	(272–291)	47.2	(281.5)		[87/4]
$\text{C}_4\text{FeI}_2\text{O}_4$	irontetracarbonyl diiodide				[14878-30-9]
		86.0±4.0	(298)		[82/20][79/25]
$\text{C}_4\text{H}_{16}\text{Cl}_2\text{FeN}_8\text{S}_4$	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)iron(II)				[28813-18-5]
	(372–405)	110±20			[70/11]
$\text{C}_6\text{H}_5\text{FeIO}_3$	allylirontricarbonyl iodide				[12189-10-5]
		84.5±4.0	(298)		[82/20][79/25]
$\text{C}_8\text{H}_6\text{Fe}_2\text{O}_6\text{S}_2$	hexacarbonylbis(methanethiolato)diiron				[14878-96-7]
		102.8	(333)	C	[95/34]
$\text{C}_9\text{Fe}_2\text{O}_9$		109.8	(298)		[95/34]
	diiron nonacarbonyl				[15321-51-4]
	(296–314)	135.3	(305)		[87/4]
$\text{C}_9\text{H}_{12}\text{FeO}$		75.3±21.0	(298)		[82/20][72/21]
	<i>bis</i> (1,3-butadiene)ironcarbonyl				
$\text{C}_{10}\text{H}_{10}\text{Fe}$		76.1±4.2	(298)		[82/20][76/16]
	ferrocene				[102-54-5]
		73.3±0.1	(298)	C	[01/5]
		74.3±0.4	(298)	ME	[95/15]
		73.2±0.7	(298)	C	[95/15]
	(292–300)	72.5±1.0	(296)	ME	[90/3]
		72.4±1.0	(298)		[90/3]
	(294–302)	70.3±1.0	(298)	ME	[89/3][90/3]
	(278–309)	72.1±0.4	(294)	ME	[88/3]
		71.9±0.4	(298)		[88/3]
	(348–446)	64.6	(397)		[87/4]
		75.6±0.4	(298)	TE,ME,DM	[83/6]
		74.0±2	(298)	TE	[81/10]
	(328–398)	70.0±2		C	[80/20]
		72.6±1.4	(298)	ME	[80/24]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
$\text{C}_{10}\text{H}_{10}\text{Fe}_2\text{O}_6\text{S}_2$	hexacarbonyl <i>bis</i> (ethanethiolato)diiron	73.6±0.4	(298)		[82/20][75/23]
		74.1±1.7	(298)	TCM	[73/1]
		84.0±2		C	[71/6]
		72.7±2	(298)	ME	[69/4]
		76.6±1	(298)	ME	[62/7]
		83.3		ME	[59/6]
		70.5	(406)	BG	[52/6]
		105.4	(340)	C	[95/34]
		112.0	(298)		[95/34]
					[28829-01-8]
$\text{C}_{10}\text{H}_{14}\text{FeO}_4$	<i>bis</i> (2,4-pentanedionato)iron(II)				[14024-17-0]
	(330–368)	131.2±8.7	(298)	ME	[90/21]
		117.6	(385)		[70/10]
$\text{C}_{11}\text{H}_8\text{FeO}_3$	cyclooctatetraeneirontricarbonyl				[12093-05-9]
		87.0±4.0	(298)		[82/20][79/25]
$\text{C}_{12}\text{H}_{12}\text{FeO}$	acetylferrocene				[1271-55-2]
	(329–358)	115.6±2.5	(298)		[81/10]
$\text{C}_{12}\text{Fe}_3\text{O}_{12}$	triiron dodecacarbonyl				[17685-52-8]
		96.0±21.0	(298)		[82/20][72/21]
$\text{C}_{13}\text{H}_{16}\text{FeO}$	<i>bis</i> (1,3-cyclohexadiene)ironcarbonyl				[34978-83-1]
		95.0±4.2	(298)		[82/20][76/16]
$\text{C}_{14}\text{H}_{14}\text{FeO}_2$	1,1'-diacetylferrocene				[1273-94-5]
	(360–400)	91.9±2.5	(298)		[81/10]
$\text{C}_{15}\text{H}_3\text{F}_{18}\text{FeO}_6$	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)iron(III)				[17786-67-3]
	(333–363)	60		TGA	[00/35]
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{FeO}_6$	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)iron(III)				[14526-22-8]
	(373–403)	96		TGA	[00/35]
	(378–438)	104.6±0.8		GS	[85/16]
		80.3	(433)		[77/25]
		128.9	(345)		[70/10]
		87.0			[60/17]
$\text{C}_{15}\text{H}_{21}\text{FeO}_6$	<i>tris</i> (2,4-pentanedionato)iron(III)				[14024-18-1]
	(413–443)	112		TGA	[00/35]
		118		TGA	[97/29]
	(369–388)	124.6±0.9	(378)	TE,ME	[96/3]
		128.6±0.9	(298)		[96/3]
	(338–355)	114.2±1.5			[92/11]
	(309–360)	126.4±3.1	(298)	ME	[90/21]
		138.4±5.2	(298)	C	[85/5]
		100	(395)	T	[81/15]
		113.6±3.8			[80/30]
		99±0.8			[79/21][81/15]
					[70/17]
		114.2	(385)		[70/10]
		65.3±3.3	(298)		[82/20][68/13]
		U23.4		I	[64/2]
		81.6			[60/17]
$\text{C}_{15}\text{H}_{30}\text{FeN}_3\text{S}_6$	<i>tris</i> (diethylthiocarbamato)iron(III)				[34768-31-5]
		65.7±1.7	(246)		[70/12]
$\text{C}_{17}\text{H}_{14}\text{FeO}$	benzoylferrocene				[1272-44-2]
	(358–382)	116.3±6	(298)	TE,ME	[83/15]
$\text{C}_{18}\text{H}_{27}\text{FeO}_6$	<i>tris</i> (3-methylpentane-2,4-dionato)iron(III)				[13978-46-6]
		164.5	(422)		[92/29]
$\text{C}_{20}\text{H}_{30}\text{Fe}$	<i>bis</i> ( $\eta^5$ -pentamethylcyclopentadienyl)iron				[12126-50-0]
		96.8±0.6	(298)	C	[01/5]
$\text{C}_{24}\text{H}_{12}\text{FeO}_6\text{S}_3$	<i>tris</i> (1-(2-thenoyl)-4,4,4-trifluoro-1,3-butanedione)iron(III)				[14319-78-9]
		U46.4			[60/17]
$\text{C}_{24}\text{H}_{18}\text{FeO}_2$	1,1'-dibenzoylferrocene				[12180-80-2]
	(358–381)	109.3±6	(298)	TE,ME	[83/15]
$\text{C}_{30}\text{H}_{27}\text{FeO}_6$	<i>tris</i> (benzoylacetonato)iron(III)				[14323-17-2]
		U45.6		I	[64/2]
$\text{C}_{33}\text{H}_{57}\text{FeO}_6$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)iron(III)				[14876-47-2]
	(413–443)	111		TGA	[00/35]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
$\text{C}_{45}\text{H}_{33}\text{FeO}_6$	<i>tris</i> (dibenzoylmethano)iron(III)	(360–378)	128.5±0.9	(369)	TE,ME [96/3]
			129.3±1.2	(298)	[96/3]
		(316–330)	136.1±1.9		[92/11]
			106.7	ME	[73/18]
			210±10		[14405-49-3]
			U31.8	I	[92/11] [64/2]
					[7789-46-0]
		iron(II) dibromide			[96/26]
		(655–833)	197.6±5	(744)	TE,ME [96/26]
			208±5	(298)	[96/26]
$\text{FeBr}_2$	iron(II) dichloride	(680–720)	196±8	(700)	TE [60/23][96/26]
		(673–962)	197±2	(817)	GS [55/12][96/26]
			210±6	(298)	[55/12][96/26]
		(623–718)	197±4	(670)	ME [55/12][96/26]
					[7758-94-3]
$\text{FeCl}_2$	iron(II) difluoride	(693–866)	198.9±6	(780)	TE,ME [96/26]
			204±6	(298)	[96/26]
		(694–745)	189±8	(719)	TE [60/23][96/26]
		(621–658)	186±12	(640)	MS [58/22][96/26]
			193±12	(298)	[58/22][96/26]
$\text{FeF}_2$	iron(II) trimethyl gallium	(958–1178)	263±4	(1068)	TE,ME [96/26]
			271±4	(298)	[96/26]
		(848–1142)	263±3	(995)	ME [76/22][96/26]
			270±3	(298)	[76/22][96/26]
Ga					
$\text{C}_3\text{H}_9\text{Ga}$	trimethyl gallium				[1445-79-0]
	(247–257)	45.2	(252)		[87/4]
$\text{C}_{15}\text{H}_3\text{F}_{18}\text{GaO}_6$	<i>tris</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)gallium(III)				[19648-92-1]
	(333–363)	53		TGA	[00/35]
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{GaO}_6$	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)gallium(III)				[15453-83-5]
	(373–403)	75		TGA	[00/35]
	(378–433)	118.8±1.7		GS	[85/16]
	(386–401)	89.4±6.7			[78/27]
$\text{C}_{15}\text{H}_{21}\text{GaO}_6$	<i>tris</i> (pentane-2,4-dionato)gallium(III)				[14405-43-7]
	(413–433)	90		TGA	[00/35]
$\text{C}_{16}\text{H}_{36}\text{Ga}_4\text{S}_4$	$[(\text{CH}_3)_3\text{C}\text{Ga}(\mu^3-\text{S})]_4$				[135283-83-9]
	(367–380)	110	(373)	TGA	[97/29]
$\text{C}_{16}\text{H}_{36}\text{Ga}_4\text{Se}_4$	$[(\text{CH}_3)_3\text{C}\text{Ga}(\mu^3-\text{Se})]_4$				[13528-84-0]
	(375–388)	119	(381)	TGA	[97/29]
$\text{C}_{16}\text{H}_{36}\text{Ga}_4\text{Te}_4$	$[(\text{CH}_3)_3\text{C}\text{Ga}(\mu^3-\text{Te})]_4$				[135258-40-1]
	(391–422)	131	(406)	TGA	[97/29]
$\text{C}_{20}\text{H}_{44}\text{Ga}_4\text{S}_4$	$[(\text{C}_2\text{H}_5(\text{CH}_3)_2\text{C})\text{Ga}(\mu^3-\text{S})]_4$				[166331-96-0]
	(369–382)	124	(375)	TGA	[97/29]
$\text{C}_{20}\text{H}_{44}\text{Ga}_4\text{Se}_4$	$[(\text{C}_2\text{H}_5(\text{CH}_3)_2\text{C})\text{Ga}(\mu^3-\text{Se})]_4$				[176100-40-6]
	(395–407)	137	(375)	TGA	[97/29]
$\text{C}_{20}\text{H}_{44}\text{Ga}_4\text{Te}_4$	$[(\text{C}_2\text{H}_5(\text{CH}_3)_2\text{C})\text{Ga}(\mu^3-\text{Te})]_4$				[176100-41-7]
	(416–432)	140	(324)	TGA	[97/29]
$\text{C}_{24}\text{H}_{52}\text{Ga}_4\text{S}_4$	$[(\text{C}_2\text{H}_5)_2(\text{CH}_3)\text{C}\text{Ga}(\mu^3-\text{S})]_4$				[166331-97-1]
	(407–420)	137	(413)	TGA	[97/29]
$\text{C}_{24}\text{H}_{52}\text{Ga}_4\text{Se}_4$	$[(\text{C}_2\text{H}_5)_2(\text{CH}_3)\text{C}\text{Ga}(\mu^3-\text{Se})]_4$				[187612-49-3]
	(388–420)	147	(404)	TGA	[97/29]
$\text{C}_{24}\text{H}_{52}\text{Ga}_4\text{Te}_4$	$[(\text{C}_2\text{H}_5)_2(\text{CH}_3)\text{C}\text{Ga}(\mu^3-\text{Te})]_4$				[176100-42-8]
	(432–447)	151	(439)	TGA	[97/29]
$\text{C}_{28}\text{H}_{60}\text{Ga}_4\text{S}_4$	$[(\text{C}_2\text{H}_5)_3\text{C}\text{Ga}(\mu^3-\text{S})]_4$				[187612-47-1]
	(432–444)	149	(438)	TGA	[97/29]
$\text{C}_{28}\text{H}_{60}\text{Ga}_4\text{Se}_4$	$[(\text{C}_2\text{H}_5)_3\text{C}\text{Ga}(\mu^3-\text{Se})]_4$				[187612-51-7]
	(452–464)	156	(458)	TGA	[97/29]
$\text{C}_{28}\text{H}_{60}\text{Ga}_4\text{Te}_4$	$[(\text{C}_2\text{H}_5)_3\text{C}\text{Ga}(\mu^3-\text{Te})]_4$				[187612-52-8]
	(444–456)	156	(450)	TGA	[97/29]
$\text{C}_{33}\text{H}_{57}\text{O}_6\text{Ga}$	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)gallium(III)				[34228-15-4]
	(413–443)	87		TGA	[00/35]
		102.1		ME	[73/18]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
(GaBr <sub>3</sub> ) <sub>n</sub> –(NH <sub>3</sub> ) <sub>n</sub>	gallium tribromide–ammonia complex			[54955-92-9]
		67.4±1.3		[75/27]
(GaCl <sub>3</sub> ) <sub>n</sub> –(NH <sub>3</sub> ) <sub>n</sub>	gallium trichloride–ammonia complex			[50599-24-1]
		75.6±1.3		[75/27]
Gd				
C <sub>10</sub> H <sub>10</sub> ClGd	bis(cyclopentadienyl)gadolinium chloride			[11087-14-2]
	(338–438)	138.5±2.1		[71/32]
C <sub>15</sub> H <sub>15</sub> Gd	tris(cyclopentadienyl)gadolinium			[1272-21-5]
	(513–623)	106.7±2.9		[73/31]
C <sub>30</sub> H <sub>30</sub> F <sub>21</sub> GdO <sub>6</sub>	tris(1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)gadolinium(III)			[17631-67-3]
	(362–385)	154.8±0.8		[71/25]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Gd	tris(2,2,6,6-tetramethylheptane-3,5-dionato)gadolinium(III)			[14768-15-1]
		166.1±3.5	(298)	DSC
		78.8±1.5		[99/33]
	(383–418)	181.2	(400)	ME
		163.6		[81/21]
	(420–456)	161.3	(438)	BG
				[73/18]
				[69/19]
Ge				
C <sub>3</sub> H <sub>9</sub> FGe	fluorotrimethylgermane			[661-370-0]
	(250–284)	40.0	(267)	SG
C <sub>8</sub> H <sub>24</sub> Ge <sub>4</sub> O <sub>4</sub>	octamethyltetragermoxane			[87/4][61/9]
		68.2±4.2	(298)	
C <sub>16</sub> H <sub>12</sub> Ge	diethynylidiphenylgermane			[82/20][72/19]
		133.9		[1675-59-8]
C <sub>16</sub> H <sub>18</sub> Ge	1,1-diphenylgermolane			[75/28]
		104.6±2.8	(298)	B
C <sub>20</sub> H <sub>18</sub> Ge	triphenyl vinylgermanium			[4514-06-1]
		98.7±1.6	(298)	ME,TE
C <sub>24</sub> H <sub>20</sub> Ge	tetraphenylgermane			[4049-97-2]
	(402–480)	148.6	(441)	
		156.9±4.2	(298)	[88/8]
C <sub>26</sub> H <sub>20</sub> Ge	triphenyl phenylethyneylgermane			[1048-05-1]
		107.5±1.5	(298)	
C <sub>28</sub> H <sub>28</sub> Ge	tetrabenzylgermane			[87/4]
		168.6±8.4	(298)	[82/20][69/17]
C <sub>32</sub> H <sub>16</sub> Cl <sub>2</sub> GeN <sub>8</sub>	germanium phthalocyanine dichloride			[4131-49-1]
		147.4±12.4		
C <sub>36</sub> H <sub>30</sub> Ge <sub>2</sub> O	bis(triphenyl germanium) oxide			[2181-40-0]
		98.0±1.5	(298)	ME,TE
C <sub>36</sub> H <sub>30</sub> Ge <sub>2</sub>	hexaphenyldigermane			[88/8]
		209.2±4.2	(298)	[2816-39-9]
GeCl <sub>4</sub>	germanium tetrachloride			[82/20][70/15]
	(187–221)	44.6±0.2		[10038-98-9]
GeF <sub>2</sub>	germanium difluoride			[64/12]
		82.8±4.2	(298)	[13940-63-1]
		93.3±10.5	(298)	[71/26]
GeI <sub>4</sub>	germanium tetraiodide			[71/26]
		87.1±3	(298)	[13573-08-5]
		86.7±3	(298)	[99/14]
	(323–420)	76.5±5.7	(298)	[99/14]
				[87/22]
Ha				
HaCl <sub>5</sub>	hahnium(V) pentachloride			[146837-09-4]
		≤120	(298)	[96/25]
HaOCl <sub>3</sub>	hahnium(V) oxychloride			[143928-41-0]
	(298–607)	152±18	(298)	[96/25]
Hf				[68/19][01/3]
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> Hf	bis(cyclopentadienyl)hafnium dichloride			[12116-66-4]
		107.3±2.4	(298)	
		110.2±2.9	(298)	ME
	(394–447)	100.3	(420.5)	[01/3]
		106.7±2.1	(298)	[87/4]
		100.4±1.3		[82/20][76/14]
C <sub>20</sub> H <sub>16</sub> F <sub>12</sub> HfO <sub>8</sub>	tetrakis(1,1,1-trifluoro-2,4-pentanedionato)hafnium(IV)			[77/23]
				[17475-68-2]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
$\text{C}_{20}\text{H}_{28}\text{HfO}_8$	(383–438)	129.7±3.8		GS	[85/16]
	(383–438)	124.7±3.8		GS	[85/16]
	<i>tetrakis(pentane-2,4-dionato)hafnium(IV)</i>	150.6±4.2			[17475-67-1] [91/23]
$\text{HfCl}_4$	hafnium tetrachloride				[13499-05-3]
	(398–500)	97.9±1.2	(499)	T	[94/22]
	(353–433)	107.9±0.8			[73/30]
Hg					
$\text{CH}_3\text{BrHg}$	methylmercuric bromide				[506-83-2]
	(258–297)	67.6±1.6	(277.5)	V	[87/4][51/14]
$\text{CH}_3\text{ClHg}$	methylmercuric chloride				[115-09-3]
	(278–307)	64.9±1.6	(298)	V	[87/4][82/20] [50/6][51/14]
$\text{CH}_3\text{HgI}$	methylmercuric iodide				[143-36-2]
	(263–290)	65.3±1.6	(276)	V	[51/14]
$\text{C}_2\text{H}_5\text{BrHg}$	ethylmercuric bromide				[107-26-6]
	(285–303)	76.5±2.9	(294)	V	[87/4][82/20] [51/10][51/14]
$\text{C}_2\text{H}_5\text{ClHg}$	ethylmercuric chloride				[107-27-7]
	(283–303)	76.2±2.9	(293)	V	[87/4][82/20] [51/10][51/14]
$\text{C}_2\text{H}_5\text{HgI}$	ethylmercuric iodide				[2440-42-8]
	(286–303)	79.7±2.9	(294.5)	V	[87/4][82/20] [51/10][51/14]
$\text{C}_4\text{H}_{16}\text{Cl}_2\text{HgN}_8\text{S}_4$	<i>trans</i> -dichloro- <i>tetrakis(thiourea)mercury(II)</i>				[28813-22-1]
		101±20			[70/11]
$\text{C}_{10}\text{H}_{14}\text{Cl}_2\text{HgN}_6\text{O}_2$	[mercury(1-methylcytosine) <sub>2</sub> Cl <sub>2</sub> ]				[84/12]
	(428–443)	150.8±19	(435)	ME	[84/12]
$\text{C}_{10}\text{H}_{20}\text{HgN}_2\text{S}_4$	bis(diethyldithiocarbamate) mercury complex				[14239-51-1]
	(378–403)	47.6	(390.5)		[87/4]
$\text{C}_{12}\text{H}_{12}\text{Hg}$	diphenylmercury				[587-85-9]
	(314–303)	112.8±0.8	(298)	ME	[58/9]
$\text{C}_{14}\text{H}_{14}\text{Hg}$	bis(benzyl)mercury				[780-24-5]
	(350–390)	88.7±2.1		ME,TE	[84/19]
$\text{C}_{14}\text{H}_{28}\text{HgN}_2\text{S}_4$	bis(dipropylidithiocarbamate)mercury(II)				[21439-56-5]
		200±2	(298)	DSC,E	[92/19]
$\text{C}_{16}\text{H}_{10}\text{Hg}$	bis(phenylethynyl)mercury				[6077-10-7]
	(350–390)	99.2±1.4		ME,TE	[84/19]
$\text{C}_{18}\text{H}_{36}\text{HgN}_2\text{S}_4$	bis(dibutylidithiocarbamate)mercury(II)				[21439-58-7]
		193±3	(298)	DSC,E	[91/15]
$\text{C}_{18}\text{H}_{36}\text{HgN}_2\text{S}_4$	bis(diisobutyldithiocarbamate)mercury(II)				[79001-48-2]
		247±1	(298)	DSC,E	[94/33]
Ho					
$\text{C}_{15}\text{H}_{15}\text{Ho}$	<i>tris(cyclopentadienyl)holmium(III)</i>				[1272-22-6]
		102.1±2.1			[73/32]
$\text{C}_{33}\text{H}_{57}\text{HoO}_6$	(338–348)	119.7±2.1		ME	[71/32][71/33]
	<i>tris(2,2,6,6-tetramethylheptane-3,5-dionato)holmium(III)</i>	131.0±2.9			[15522-73-3]
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{InO}_6$	(363–418)	152.7	(390)	DSC	[93/26]
	(420–458)	131.4	(439)	ME	[81/21]
				BG	[69/19]
In					
$\text{C}_3\text{H}_9\text{In}$	trimethyl indium				[3385-78-2]
		48.5±2.5	(298)		[82/20][68/11]
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{InO}_6$	(328–362)	57.7	(344)		[87/4][41/4]
	<i>tris(1,1,1-trifluoro-2,4-pentanedionato)indium(III)</i>	112.1±1.3			[15453-87-9]
	(378–428)	77.4±0.6 (liq)		GS	[85/16]
$\text{C}_{15}\text{H}_{30}\text{InN}_3\text{S}_6$	(398–478)	176.7±3.3	(298)		[78/27]
	<i>tris(diethyldithiocarbamate)indium(III)</i>	130.0		DSC,E	[15741-07-8]
$\text{C}_{20}\text{H}_{48}\text{In}_2\text{P}_4$	<i>bis</i> [ $\mu$ -[ <i>bis</i> (1,1-dimethylethyl)phosphino]] <i>tetramethyldiindium(III)</i>			ME	[00/13]
		130.0			[115381-28-7]
$\text{C}_{21}\text{H}_{42}\text{InN}_3\text{S}_6$	<i>tris</i> (dipropylidithiocarbamate)indium(III)				[88/20]
					[87052-01-5]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
C <sub>21</sub> H <sub>42</sub> InN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (diisopropylthiocarbamate)indium(III)	372.8±3.4	(298)	DSC,E	[00/13] [85883-33-6]
		279.5±3.5	(298)	DSC,E	[00/13]
C <sub>27</sub> H <sub>54</sub> InN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (dibutylthiocarbamate)indium(III)	358.3±3.2	(298)	DSC,E	[23467-56-3] [00/13]
C <sub>27</sub> H <sub>54</sub> InN <sub>3</sub> S <sub>6</sub>	<i>tris</i> (diisobutylthiocarbamate)indium(III)	182.0±3.3	(298)	DSC,E	[85129-27-7] [00/13]
C <sub>33</sub> H <sub>57</sub> InO <sub>6</sub>	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)indium(III)	129.3		ME	[34269-03-9] [73/18]
InBr <sub>3</sub>	indium(III) bromide	147±4	(298)	TE	[13465-09-3] [97/23]
InCl <sub>3</sub>	indium(III) chloride	152±4	(570)	TE	[10025-82-8] [98/35]
	(495–648)	158±4	(298)		[98/35]
		150.4	(710)		[94/37]
		161.1	(298)		[94/37][98/35]
	(453–572)	151.1±1.2	(489)	MS	[88/30]
		155.6±1.2	(298)		[88/30][98/35]
	(478–563)	161.1±1.6	(524)		[88/30]
		168.5±1.6	(298)		[88/30][98/35]
	(623–773)	156.3	(698)		[74/29]
		166.6	(298)		[74/29][98/35]
InI <sub>3</sub>	indium(III) iodide	136±5.0	(298)	TE,ME	[13510-35-5] [97/22]
Ir					
C <sub>7</sub> H <sub>7</sub> IrO <sub>4</sub>	dicarbonyl-2,4-pentanedionato iridium complex				[14023-80-4]
	(286–325)	92.±1.3	(306)	ME	[78/20][87/4]
C <sub>7</sub> H <sub>13</sub> Cl <sub>2</sub> IrO <sub>2</sub>	bis(chloroethylene)-2,4-pentanedionato iridium complex				[78/20][87/4]
	(281–298)	89.5±4.2	(290)	ME	[52654-27-0]
C <sub>9</sub> H <sub>15</sub> IrO <sub>2</sub>	bis(ethylene)-2,4-pentanedionato iridium complex				[78/20][87/4]
	(283–311)	82.8±4.2	(297)	ME	[66467-05-8]
C <sub>11</sub> H <sub>19</sub> IrO <sub>2</sub>	bis(propylene)-2,4-pentanedionato iridium complex				[78/20][87/40]
	(269–304)	90±1.3	(287)	ME	[11065-24-0]
C <sub>12</sub> O <sub>12</sub> Ir <sub>4</sub>	tetrairidiumdodecacarbonyl	104.6±20	(298)		[82/20][74/26]
C <sub>13</sub> H <sub>19</sub> IrO <sub>6</sub>	bis(vinyl acetate)-2,4-pentanedionato iridium complex				[66467-07-0]
	(325–344)	120.5±2.9	(333)	ME	[78/20]
C <sub>13</sub> H <sub>19</sub> IrO <sub>6</sub>	bis(methyl acrylate)-2,4-pentanedionato iridium complex				[66467-08-1]
	(311–335)	117.2±5	(323)	ME	[78/20]
C <sub>15</sub> H <sub>21</sub> IrO <sub>6</sub>	<i>tris</i> (2,4-pentanedionato)iridium(III)				[15635-87-7]
	(423–473)	129.3±0.8		GS	[00/12]
	(383–433)	130.5±3.4		ME	[00/12]
	(387–513)	101.6±1.8		MCV	[00/12]
	(468–518)	86.6±1.7		SMZG	[00/12]
		NA			[94/34]
La					
C <sub>15</sub> H <sub>15</sub> La	<i>tris</i> (cyclopentadienyl)lanthanum				[1272-23-7]
		114.6±4.0	(298)		[82/20][74/23]
	(548–663)	102.1±2.9			[73/31]
C <sub>30</sub> H <sub>30</sub> F <sub>21</sub> LaO <sub>6</sub>	<i>tris</i> (1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)lanthanum(III)				[19106-89-9]
	(387–403)	145.2±2.9		ME	[71/25]
C <sub>33</sub> H <sub>57</sub> LaO <sub>6</sub>	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)lanthanum(III)				[14319-13-2]
		156.0±4.6		DSC	[97/3][00/16]
		116.1±8.4			[96/17]
		107.9±4.6			[96/31][00/16]
	(388–423)	179.5	(405)	ME	[81/21]
		164.4		ME	[73/18]
	(450–520)	143.6	(485)	BG	[69/19]
Li					
C <sub>2</sub> H <sub>5</sub> Li	ethyl lithium				[811-49-4]
	(298–333)	116.6	(315.5)		[87/4][62/9]
C <sub>4</sub> H <sub>9</sub> Li	butyl lithium				[109-72-8]
	(333–368)	109.7	(350.5)		[87/4][62/12]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)		Method	Reference
C <sub>11</sub> H <sub>19</sub> LiO <sub>2</sub>	(2,2,6,6-tetramethylheptane-3,5-dionato)lithium	174.5		[73/18]
LiF	lithium fluoride		ME	[7789-24-4]
	(1073–1121)	268.2±4.2		[59/18][58/20]
	(957–1113)	267.8±4.2		[58/21]
Lu				
C <sub>15</sub> H <sub>15</sub> Lu	<i>tris</i> (cyclopentadienyl)lutetium(III)	123.0±2.9		[1272-24-8]
C <sub>15</sub> H <sub>21</sub> LuO <sub>6</sub>	<i>tris</i> (2,4-pentanedionato)lutetium(III)	79±13	(418)	[17966-84-6]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Lu	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)lutetium(III)	135.8±2.9	(298)	[15497-45-2]
	(363–413)	154.8	(390)	ME [81/21]
	(420–448)	134.2	(434)	BG [69/19]
Mg				
C <sub>10</sub> H <sub>10</sub> Mg	<i>bis</i> (cyclopentadienyl) magnesium	68.2±1.3	(298)	[1284-72-6]
C <sub>10</sub> H <sub>22</sub> Mg	<i>bis</i> (2,2-dimethylpropyl)magnesium	160.0±2.0	(333)	[82/20][67/9]
C <sub>18</sub> H <sub>12</sub> MgN <sub>2</sub> O <sub>2</sub>	<i>bis</i> (8-hydroxyquinolino) magnesium(II)	230.2±4.0	(298)	ME [83/19]
C <sub>20</sub> H <sub>16</sub> MgN <sub>2</sub> O <sub>2</sub>	<i>bis</i> (8-hydroxy-2-methylquinolinate)magnesium(II)	212.2±6.5	(541)	[14639-28-2]
	(533–549)	224.3±6.5	(298)	ME [94/16]
MgF <sub>2</sub>	magnesium fluoride	359.8	(1330)	[14406-92-9]
	(1220–1450)	327.3±4.3	(1400)	MS [62/10]
	(1273–1513)	348.2±4.3	(298)	TE [64/13]
				[64/13]
Mn				
C <sub>4</sub> H <sub>16</sub> Cl <sub>2</sub> MnN <sub>8</sub> S <sub>4</sub>	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)manganese(II)	133±20		[28813-17-4]
	(382–409)			[70/11]
C <sub>5</sub> BrMnO <sub>5</sub>	bromo(pentacarbonyl)manganese	58.6±8.4	(298)	[14516-54-2]
		88.0±2.0	(298)	[82/20][72/21]
C <sub>5</sub> ClMnO <sub>5</sub>	chloro(pentacarbonyl)manganese	58.6±8.4	(298)	C [82/21]
		91±9		[14100-30-2]
C <sub>5</sub> IMnO <sub>5</sub>	iodo(pentacarbonyl)manganese	77.4±1.4	(298)	[82/20][72/21]
C <sub>6</sub> F <sub>3</sub> MnO <sub>5</sub>	pentacarbonyl(trifluoromethyl)manganese	77.8±1.0	(298)	C [14879-42-6]
C <sub>6</sub> H <sub>3</sub> MnO <sub>5</sub>	methyl(pentacarbonyl)manganese	60.3±1.0		[82/21]
	(293–403)	60.2		[13601-14-4]
C <sub>7</sub> F <sub>3</sub> MnO <sub>6</sub>	pentacarbonyl(trifluoroacetyl)manganese	79±5	(298)	[82/21]
C <sub>7</sub> H <sub>3</sub> MnO <sub>6</sub>	acetyl(pentacarbonyl)manganese	80±7	(298)	C [13963-91-2]
C <sub>8</sub> H <sub>5</sub> MnO <sub>3</sub>	cyclopentadienyl(tricarbonyl)manganese	52.4±3.1		[82/21]
C <sub>8</sub> H <sub>10</sub> Cl <sub>2</sub> MnN <sub>6</sub> O <sub>2</sub>	[manganese-(cytosine) <sub>2</sub> Cl <sub>2</sub> ]	U 146±21	(443)	C [74543-44-5]
	(433–453)		ME [84/12]	
C <sub>10</sub> MnO <sub>10</sub> Re	decacarbonylmanganeserhenium	109±4	(363)	[14693-30-2]
		86±4	(298)	[98/33]
	(363–440)	68.6	(401)	C [98/33]
C <sub>10</sub> Mn <sub>2</sub> O <sub>10</sub>	decacarbonyldimanganese	80.3±4.2	(298)	[71/20]
		92.3±2.1	(298)	[10170-69-1]
	(351–428)	80.3±2.1	(390)	[82/20][58/10]
		62.8±4.2		[60/15]
C <sub>10</sub> H <sub>6</sub> Mn <sub>2</sub> O <sub>8</sub> S <sub>2</sub>	<i>bis</i> ( $\mu$ -methanethiolato)octacarbonyldimanganese			[21321-38-0]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Method	Reference
$\text{C}_{10}\text{H}_{10}\text{Mn}$	<i>bis</i> (cyclopentadienyl)manganese complex (298–445)	$114.2 \pm 0.8$	(340)	C	[95/18] [1271-27-8]
		72.4	(371.5)		[87/4]
		$75.7 \pm 1.7$	(298)		[82/20][71/22]
		72.4			[56/11]
$\text{C}_{10}\text{H}_{14}\text{MnO}_4$	<i>bis</i> (2,4-pentanedionato) manganese(II) (390–440)	$139.3 \pm 2.5$	(298)	ME	[14024-58-9] [90/21]
		87	(343)		[81/15]
		88.7			[72/24]
		88.7	(400)		[70/10]
$\text{C}_{11}\text{H}_5\text{MnO}_5$	phenyl(pentacarbonyl)manganese	$84.9 \pm 4.4$	(298)	C	[13985-77-8] [82/21]
$\text{C}_{12}\text{H}_5\text{MnO}_6$	benzoyl(pentacarbonyl)manganese	$123 \pm 3$	(298)	C	[15612-92-7] [82/21]
$\text{C}_{12}\text{H}_7\text{MnO}_5$	benzyl(pentacarbonyl)manganese	$84.5 \pm 0.7$	(298)	C	[14049-86-6] [82/21]
$\text{C}_{15}\text{H}_{12}\text{F}_9\text{MnO}_6$	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato) manganese(III) (378–413)	$120.5 \pm 9.2$		GS	[14526-24-0] [85/16]
		117.3			[71/17]
		77.8			[64/4]
		<i>tris</i> (2,4-pentanedionato) manganese(III) (320–380)	$124.7 \pm 3.8$	ME	[14284-89-0] [90/21]
$\text{C}_{15}\text{H}_{21}\text{MnO}_6$		$120 \pm 10$	(298)	E	[88/28]
		99	(392)		[81/15]
		113.0	(370)		[70/10]
		$77.8 \pm 0.8$	(298)		[82/20][68/12]
$\text{C}_{18}\text{H}_{12}\text{MnN}_2\text{O}_2$	<i>bis</i> (8-hydroxyquinolinato) manganese(II) (615–650)	$194.6 \pm 10.4$	(298)	ME	[14495-13-7] [94/16]
		208.4 ± 14	(633)	ME	[84/12]
		$226 \pm 14$	(298)		[84/12]
		<i>bis</i> (8-hydroxy-2-methylquinolinate)manganese(II) (521–541)	$199.6 \pm 7.2$	ME	[14515-78-7] [98/8]
$\text{C}_{30}\text{H}_{27}\text{MnO}_6$	<i>tris</i> (1-phenylbutane-1,3-dionato)manganese(III) (343–383)	$211.2 \pm 7.2$	(298)	ME	[98/8]
		$195 \pm 10$	(298)	E	[88/28]
		$140 \pm 10$	(298)	E	[14324-99-3] [88/28]
		$175 \pm 1$		UV	[31004-82-7] [93/27]
$\text{MnF}_2$	manganese(II) fluoride	$318.4 \pm 8.4$	(298)	ME	[7782-64-1] [64/18]
Mo					
$\text{C}_6\text{MoO}_6$	molybdenum hexacarbonyl (265–300)	77.7			[13939-06-5] [00/33]
		69.1	(331)		[87/4]
		$76.9 \pm 0.9$	(263)	ME	[79/19][80/34] [75/22][74/24]
		$73.8 \pm 1.0$			
		69.7	(363)		[60/18]
		72.5			[52/7]
		72.8			[47/5]
		68.2			[35/2]
$\text{C}_7\text{H}_3\text{MoNO}_5$	acetonitrile molybdenum pentacarbonyl				[17594-16-0]
$\text{C}_8\text{F}_{12}\text{Mo}_2\text{O}_8$	$\text{dimolybdenum tetratrifluoroacetate}$ (330–370)	$105.8 \pm 5.6$	(298)		[80/31] [36608-07-8]
		$113.6 \pm 1.7$	(350)	ME,TE	[84/20]
		$165.0 \pm 8.4$			[71561-64-3] [82/20]
$\text{C}_8\text{H}_{12}\text{CrMoO}_8$	chromium molybdenum tetraacetate	$170.5 \pm 7$	(410)	ME,TE	[84/20]
$\text{C}_8\text{H}_{12}\text{Mo}_2\text{O}_8$	$\text{dimolybdenum tetraacetate}$ (400–420)	$165.0 \pm 8.4$	(298)	ME,TE	[14221-06-8] [82/20][79/23]
		$165.0 \pm 8.4$			[100207-68-9] [79/18][82/20]
$\text{C}_8\text{H}_{24}\text{MoN}_4$	<i>tetrakis</i> (dimethylamino)molybdenum	$72.4 \pm 6$	(298)	C	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
C <sub>9</sub> H <sub>9</sub> MoN <sub>3</sub> O <sub>3</sub>	<i>tris</i> (acetonitrile) molybdenum tricarbonyl (283–308)	111.3±3.0 96.0±10.0	(298) (298)	[15038-48-9] [80/31] [82/20][78/25]
C <sub>10</sub> H <sub>5</sub> MoNO <sub>5</sub>	pyridine(pentacarbonyl)molybdenum (283–299)	102.0±2.0	(291)	ME [14324-76-6] [79/19]
C <sub>10</sub> H <sub>8</sub> MoO <sub>3</sub>	cycloheptatriene(tricarbonyl)molybdenum	88.0±4.0	(298)	[12125-77-8] [82/20][77/22]
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> Mo	dichlorobis( $\eta^5$ -2,4-cyclopentadien-1-yl)molybdenum	100.4±4.2	(298)	[12184-22-4] [76/20]
C <sub>10</sub> H <sub>10</sub> I <sub>2</sub> Mo	<i>bis</i> ( $\eta^5$ -2,4-cyclopentadien-1-yl)diodomolybdenum	100.4±4.2	(298)	E [12184-29-1] [76/20]
C <sub>10</sub> H <sub>11</sub> MoNO <sub>5</sub>	piperidine(pentacarbonyl)molybdenum (275–289)	121.9±5.1	(282)	ME [19456-57-6] [79/19]
C <sub>10</sub> H <sub>12</sub> Mo	<i>bis</i> ( $\eta^5$ -2,4-cyclopentadien-1-yl)dihydromolybdenum	81.4±1.0 92.5±2.1		ME [90/30] [76/20]
C <sub>11</sub> H <sub>8</sub> MoO <sub>4</sub>	norbornadienemolybdenumtetracarbonyl	92.0±4.0	(298)	[12146-37-1] [82/20][77/22]
C <sub>12</sub> H <sub>12</sub> Mo	dibenzene molybdenum	94.6±8		[12129-68-9] [70/1][61/4]
C <sub>12</sub> H <sub>16</sub> Mo	dimethyldicyclopentadienylmolybdenum	70.4±4.2	(298)	[39333-52-3] [82/20][80/37]
C <sub>12</sub> H <sub>36</sub> Mo <sub>2</sub> N <sub>6</sub>	<i>hexakis</i> (dimethylamine)dimolybdenum(II)	111±8	(298)	[51956-20-8] [79/18][81/16]
C <sub>14</sub> H <sub>20</sub> Mo <sub>2</sub> O <sub>8</sub>	di- $\mu$ -acetatobis(pentane-2,4-dionato)dimolybdenum(II)	163.0±5.0	(298)	[82/20][79/23]
C <sub>16</sub> H <sub>14</sub> Mo <sub>2</sub> N <sub>2</sub> O <sub>4</sub>	di(6-methyl-2-hydroxypyridyl)diacetatodimolybdenum(II)	161.0±4.0	(298)	[82/20][81/18]
C <sub>18</sub> H <sub>15</sub> MoN <sub>3</sub> O <sub>3</sub>	<i>tris</i> (pyridine)tricarbonylmolybdenum	142.0±10.0	(298)	[15279-79-5] [82/20][78/25]
C <sub>18</sub> H <sub>42</sub> Mo <sub>2</sub> O <sub>6</sub>	<i>hexakis</i> (isopropoxy)dimolybdenum	113±10	(298)	[62521-20-4] [81/16]
C <sub>24</sub> H <sub>24</sub> Mo <sub>2</sub> N <sub>4</sub> O <sub>4</sub>	<i>tetrakis</i> (6-methyl-2-hydroxypyridyl)dimolybdenum(II)	157.0±3.0	(298)	[67634-80-4] [82/20][81/18]
C <sub>24</sub> H <sub>56</sub> Mo <sub>2</sub> O <sub>8</sub>	<i>octakis</i> (isopropoxy)dimolybdenum(II)	137.0±15	(298)	[79376-50-4] [81/16]
N				
NH <sub>3</sub>	ammonia (177–195)	31.2		[7664-41-7] [37/4]
NH <sub>3</sub> O	hydroxylamine (261–280)	64.2		[7803-49-8] [65/18]
	(273–298)	U46.5	(285)	[41/5] [12124-97-9]
NH <sub>4</sub> Br	ammonium bromide	183.7 187.9	(550) (298)	[71/28] [55/11]
NH <sub>4</sub> Cl	ammonium chloride	168.6 176.6±0.4 177.0	(550) (298)	[12125-02-9] [71/28] [61/7] [55/11]
NH <sub>4</sub> I	ammonium iodide	182.0	(298)	[12027-06-4] [55/11]
NH <sub>4</sub> CN	ammonium cyanide	84.5	(298)	[55/11]
NH <sub>4</sub> SCN	ammonium thiocyanate	133.9	(298)	[1762-95-4] [55/11]
NO	nitric oxide (94–109)	16.6	(101)	[10102-43-9] [29/2]
N <sub>2</sub> H <sub>4</sub>	hydrazine	U 46.0		[302-01-2] [41/2][01/8]
N <sub>2</sub> H <sub>4</sub> O <sub>2</sub> S	sulfamide (347–358)	101.5±1.0		[7803-58-9] [97/32][59/12]
N <sub>2</sub> H <sub>4</sub> O <sub>3</sub>	ammonium nitrate (349–438)	178.7		[6484-52-2] [62/11]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
				Reference
N <sub>2</sub> O	nitrous oxide	174.9	(298)	[55/11]
	(68–80)	25.1±0.4	(74)	[10024-97-2]
	(148–182)	24.6	(161)	[74/13]
	(103–123)	23.6	(113)	[35/5]
				[30/5]
Na				
C <sub>4</sub> H <sub>9</sub> ONa	sodium <i>tert</i> -butoxide	NA		[865-48-5]
				[90/22]
C <sub>6</sub> H <sub>13</sub> ONa	sodium methyldiethylmethoxide	NA		[67638-48-6]
				[90/22]
C <sub>7</sub> H <sub>15</sub> ONa	sodium triethylmethoxide	NA		[53535-82-3]
				[90/22]
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> NaO <sub>8</sub> Pr	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5-trifluoro-2,4-pentanedionato)-praseodymate			[93557-93-8]
	(423–483)	155±2	(453)	T
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> NaO <sub>8</sub> Tb	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5-trifluoro-2,4-pentanedionato)-terbate			[12576-88-4]
	(418–473)	163±3	(445)	T
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> NaO <sub>8</sub> Y	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5-trifluoro-2,4-pentanedionato)-yttrate			[12576-89-5]
	(418–503)	130±3	(460)	T
	(463–503)	142±12	(483)	T
				[93/4]
				[93/4]
Nb				
C <sub>5</sub> H <sub>15</sub> NbO <sub>5</sub>	niobium pentamethoxide			[1066-25-7]
		80.3±10.5		ME,E
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> Nb	<i>bis</i> (cyclopentadienyl)niobium dichloride			[72/23][77/21]
		127.4±4.4	(298)	ME
NbBr <sub>5</sub>	niobium(V) pentabromide			[12793-14-5]
	(298–479)	115±18	(298)	[01/3]
		112.5	(298)	[13478-45-8]
				[96/25]
NbCl <sub>5</sub>	niobium(V) pentachloride			[96/25][91/22]
	(298–479)	94.0	(298)	[10026-12-7]
		95±16	(298)	[96/25]
NbCl <sub>3</sub> O	niobium(V) oxychloride			[113597-20-1]
	(298–607)	128.5	(298)	[96/25][91/22]
		124±16	(298)	[96/25]
Nd				
C <sub>15</sub> H <sub>15</sub> Nd	<i>tris</i> (cyclopentadienyl)neodymium(III)			[1273-98-9]
	(533–633)	108.8±3.8		[73/31]
	(338–438)	134.7±2.1		ME
C <sub>30</sub> H <sub>30</sub> F <sub>21</sub> NdO <sub>6</sub>	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)neodymium(III)			[71/32][71/33]
	(387–402)	155.2±2.9		ME
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Nd	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)neodymium(III)			[17978-76-6]
	(378–423)	159.1±3.4	(298)	DSC
	(430–491)	92.9±2.5		[71/25]
		177.0	(400)	[15492-47-4]
		158.4	(460)	ME
				[81/21]
				BG
				[69/19]
Ni				
C <sub>4</sub> H <sub>16</sub> Cl <sub>2</sub> N <sub>8</sub> NiS <sub>8</sub>	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea)nickel(II)			[28813-19-6]
	(409–447)	74±20		[70/11]
C <sub>4</sub> NiO <sub>4</sub>	nickel tetracarbonyl			[13463-39-3]
		41.6±0.5		[53/9]
C <sub>6</sub> H <sub>12</sub> N <sub>2</sub> NiS <sub>4</sub>	<i>bis</i> (dimethylidithiocarbamato) nickel complex			[15521-65-0]
	(448–478)	139.9±2.1	(463)	[87/4][78/12]
		151.9±2.1		GC
C <sub>8</sub> F <sub>18</sub> NiO <sub>2</sub> P <sub>2</sub>	dicarbonyl <i>bis</i> [ <i>tris</i> (trifluoromethyl)phosphine]nickel			[76/21]
	(293–302)	47.2	(298)	[15188-79-1]
C <sub>8</sub> F <sub>28</sub> NiP <sub>4</sub>	<i>tetrakis</i> [ <i>bis</i> (trifluoromethyl)porphinous fluoride]nickel			[66/15]
	(305–331)	66.6	(318)	[14917-18-1]
C <sub>10</sub> H <sub>8</sub> F <sub>6</sub> NiO <sub>4</sub>	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)nickel(II)			[66/15]
	(416–473)	157.7±3.3		[14324-83-5]
C <sub>10</sub> H <sub>10</sub> Ni	<i>bis</i> (cyclopentadienyl) nickel			GS
		71.5±0.6		[85/16]
		70.2±1.5	(298)	[1271-28-9]
	(353–419)	72.4±1.3	(298)	[88/3]
				[84/24]
				[82/20][75/23]
				[67/17]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)		Method	Reference
$\text{C}_{10}\text{H}_{14}\text{NiO}_4$	<i>bis</i> (2,4-pentanedionato)nickel(II) (357–420)	126.4±4.4	(298)	[3264-82-2] [90/21]
		108.2±5	(207)	[87/13]
		108.2±4.9	(480)	[87/12]
		155±80	(298)	[85/5]
		127.7±10	(381)	[84/12]
		132±10	(298)	[84/12]
		69.0		[71/17]
		95.4	(400)	[70/10]
		69.0		[60/17]
$\text{C}_{10}\text{H}_{20}\text{N}_2\text{NiS}_4$	<i>bis</i> (diethyldithiocarbamato)nickel(II) (448–478)	157.3±6.0		[14267-17-5] [89/16]
		152±0.8	(459)	[87/4][78/12]
		98.8±6	(579)	[79/20]
		91.9±6	(493)	[79/20]
		151.9±2.1		[76/21]
		61.1±1.7		[69/15]
$\text{C}_{12}\text{H}_8\text{N}_2\text{NiO}_4$	<i>bis</i> (picolinato)nickel(II)	76.6	I	[63/7]
$\text{C}_{13}\text{H}_6\text{F}_{24}\text{N}_2\text{Ni}_2\text{O}_3\text{P}_4$	$\mu$ -carbonyldicarbonyl <i>bis</i> [ $\mu$ -[(methylimino) <i>bis</i> [ <i>bis</i> (trifluoromethyl)phosphine]]]dinickel			[14402-98-3]
	(370–390)	92.3	(380)	[68/17]
$\text{C}_{14}\text{H}_{10}\text{NiO}_4$	<i>bis</i> (salicyladehydato)nickel(II)	85.4	I	[63/7]
$\text{C}_{14}\text{H}_{12}\text{N}_2\text{NiO}_2$	<i>bis</i> (salicyliminato)nickel(II)	158.2	I	[63/7]
$\text{C}_{14}\text{H}_{12}\text{N}_2\text{NiO}_4$	<i>bis</i> (salicylaldoximato)nickel(II) (403–423)	106.6±29 112±29	(413) (298)	[14363-30-5] [84/12] [84/12]
$\text{C}_{14}\text{H}_{28}\text{N}_2\text{NiS}_4$	<i>bis</i> (dipropylidithiocarbamate)nickel complex	147.2±5.0		[14516-30-4]
		126.1±0.8		[89/16] [78/12]
		148.±5.0		[15694-55-0]
$\text{C}_{14}\text{H}_{28}\text{N}_2\text{NiS}_4$	<i>bis</i> (diisopropylidithiocarbamate) nickel complex (442–477)	143.4±2.1	(459.5)	[89/16] [87/4][78/12]
				[14167-20-5]
$\text{C}_{16}\text{H}_{14}\text{N}_2\text{NiO}_2$	N,N- <i>bis</i> (salicylidene)ethylenediaminonickel(II)			[14167-20-5]
$\text{C}_{18}\text{H}_{12}\text{N}_2\text{NiO}_2$	<i>bis</i> (8-hydroxyquinolinato)nickel(II) (459–545)	149.8±7.0		[99/39] [14100-15-3]
		175.4±6.7	(298)	[94/16]
		129.9±6	(486)	[84/12]
		139±6	(298)	[84/12]
$\text{C}_{18}\text{H}_{14}\text{N}_4\text{Ni}$	dibenzotetra-aza-annulene nickel(II) complex			[39251-81-5]
$\text{C}_{18}\text{H}_{36}\text{N}_2\text{NiS}_4$	<i>bis</i> (dibutylidithiocarbamate)nickel(II)	116.6±5.5	(508)	[83/29] [13927-77-0]
		132.6±5.0		[89/16]
$\text{C}_{18}\text{H}_{36}\text{N}_2\text{NiS}_4$	<i>bis</i> (diisobutylidithiocarbamate)nickel(II)	133.6±5.0		[28371-07-5]
		152.1±1.3	(433)	[89/16] [87/4][78/12]
		170.9±3.7		[15200-70-1]
$\text{C}_{20}\text{H}_{16}\text{N}_2\text{NiO}_2$	<i>bis</i> (8-hydroxy-2-methylquinolinate)nickel(II) (489–505)	180.9±3.7	(496)	[98/8] [98/8]
		111		[14481-08-4]
		145.2±10		[99/40] [78/22]
$\text{C}_{32}\text{H}_{16}\text{N}_8\text{Ni}$	nickel(II) phthalocyanine	144.6	TGA	[14055-02-8]
$\text{C}_{44}\text{H}_{28}\text{N}_4\text{Ni}$	5,10,15,20-tetraphenylporphine nickel(II)	152±4	GS	[95/35] [14172-92-0]
$\text{NiBr}_2$	nickel(II) bromide (714–969)	207±4.0 226±1.0	(841) (298)	[00/36] [13462-88-9] [97/20] [97/20]
$\text{NiF}_2$	nickel(II) fluoride (1054–1106)	332.2±4.1	ME	[10028-18-9] [64/19]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)		Method	Reference
Np				
(C <sub>10</sub> H <sub>2</sub> F <sub>12</sub> NpO <sub>6</sub> )–(C <sub>3</sub> H <sub>9</sub> OP)	bis(1,1,1,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV) dioxide-trimethylphosphine oxide adduct (370–418)	90±3		[106617-32-7]
C <sub>20</sub> H <sub>4</sub> F <sub>24</sub> NpO <sub>8</sub>	tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV) (314–375)	81±3		[110900-26-0]
(C <sub>20</sub> H <sub>4</sub> F <sub>24</sub> NpO <sub>8</sub> )–(C <sub>3</sub> H <sub>9</sub> OP)	tetrakis(1,1,1,5,5-hexafluoro-2,4-pentanedionato)neptunium(IV)-trimethylphosphine oxide adduct (353–404)	100±4		[88/15][87/23]
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> NpO <sub>8</sub>	tetrakis(1,1,1-trimethyl-5,5-hexafluoro-2,4-pentanedionato)neptunium(IV) (374–424)	106±3		[99791-99-8]
C <sub>40</sub> H <sub>40</sub> F <sub>28</sub> NpO <sub>8</sub>	tetrakis(1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)neptunium(IV) (350–368)	147.7±2.9	(359)	ME [70/23]
Os				
C <sub>10</sub> H <sub>10</sub> Os	bis(cyclopentadienyl)osmium (393–506)	72.9±1.4 80.5±1.7 75.3	(298)	[1273-81-0] [84/31] [84/31] [59/10]
C <sub>12</sub> O <sub>12</sub> Os <sub>3</sub>	triosmium dodecacarbonyl (423–543)	104.6±20 108.4	(298) (483)	[15696-40-9] [82/20][74/26] [74/35]
P				
CCl <sub>3</sub> F <sub>2</sub> P	difluoro(trichloromethyl)phosphine (264–283)	36.8(liq)	(274)	[1112-03-4] [87/4]
CH <sub>3</sub> Cl <sub>2</sub> OP	methylphosphonic dichloride	62.3		[676-97-1] [70/1][55/4]
CH <sub>5</sub> O <sub>3</sub> P	methylphosphonic acid	48.1±4.2		[993-13-5] [55/4][70/1]
C <sub>2</sub> HF <sub>6</sub> OP	phosphinous acid, bis(trifluoromethyl) ester (233–251)	46.6	(242)	[359-65-9] [87/4][62/13]
C <sub>2</sub> HF <sub>6</sub> PS <sub>2</sub>	phosphinodithioic acid, bis(trifluoromethyl) ester (273–287)	41.9	(280)	[18799-75-2] [87/4]
C <sub>2</sub> H <sub>6</sub> ClP	chlorodimethylphosphine (233–268)	55.5	(253)	[811-62-1] [87/4][58/16]
C <sub>2</sub> H <sub>7</sub> O <sub>3</sub> P	ethylphosphonic acid	50.6±4.2		[15845-66-6] [55/4][70/1]
C <sub>3</sub> F <sub>9</sub> P <sub>3</sub> S <sub>5</sub>	2,4,5-tris(trifluoromethyl)-1,3,2,4,5-dithiatriphospholane-2,4,5-trisulfide (363–373)	96.6	(368)	[26349-17-7] [70/21]
C <sub>3</sub> N <sub>3</sub> P	tricyanophosphine (293–323)	78.3 75.3±2.9	(308) (298)	ME [1116-01-4] [87/4][76/17] [95/30][76/17]
C <sub>3</sub> H <sub>6</sub> F <sub>3</sub> PS	dimethyl(trifluoromethyl)phosphine sulfide (300–320)	68.0	(310)	[26348-92-5] [70/20]
C <sub>3</sub> H <sub>9</sub> OP	trimethylphosphine oxide	50.2±4.2	E	[676-96-0] [82/20][60/10]
C <sub>3</sub> H <sub>9</sub> PS	trimethylphosphine sulfide (366–394)	70.3	(380)	[2404-55-9] [66/13]
C <sub>4</sub> F <sub>12</sub> P <sub>4</sub>	1,2,3,4-tetrakis(trifluoromethyl)tetraphosphetane (292–339)	65.3	(307)	[393-02-2] [87/4][58/17]
C <sub>4</sub> H <sub>8</sub> Cl <sub>3</sub> O <sub>4</sub> P	(1-hydroxy-2,2,2-trichloroethyl)phosphonic acid dimethyl ester (293–357)	107	(308)	[52-68-6] [87/4]
C <sub>4</sub> H <sub>13</sub> NP <sub>2</sub>	bis(dimethylphosphino)amine (300–310)	61.7	(305)	[53/14]
C <sub>5</sub> H <sub>11</sub> P	phoshorinanone (250–291)	43.3	(276)	[4743-40-2] [87/4][66/16]
	(294–345)	39.9 (liq)	(309)	[87/4][66/16]
C <sub>6</sub> F <sub>18</sub> NP <sub>3</sub>	nitrilotris[bis(trifluoromethyl)phosphine] (273–309)	68.4	(291)	[65/21]
C <sub>9</sub> H <sub>12</sub> N <sub>3</sub> P	tris(2-cyanoethyl)phosphine (397–427)	105.7±2	(413)	[4023-54-4] [81/22]
C <sub>10</sub> H <sub>14</sub> NO <sub>5</sub> PS	ethyl parathion (O,O-diethyl-O-4-nitrophenylthiophosphate) (298–318)	100.6	(308)	[56-38-2] [79/10][83/5]
C <sub>12</sub> H <sub>16</sub> N <sub>3</sub> O <sub>3</sub> PS <sub>2</sub>	azinphos-ethyl			[2642-71-9]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number		
				Method	Reference	
C <sub>15</sub> H <sub>30</sub> N <sub>3</sub> PS <sub>6</sub>	(326–420)	86.8	(341)		[87/4]	
	phosphorus- <i>tris</i> (N,N-diethyldithiocarbamate)	143±2	(298)		[17767-20-3]	
C <sub>18</sub> H <sub>15</sub> OP	triphenylphosphine oxide	131±2	(399)	ME,TE	[87/16]	
		66±6	(298)	B	[791-28-6]	
C <sub>18</sub> H <sub>15</sub> P	triphenylphosphine	113.2±3.0	(298)		[89/28]	
		109.2±1.1	(350)		[60/9]	
C <sub>18</sub> H <sub>15</sub> O <sub>4</sub> P	triphenylphosphate	96.2±8.4	(298)		[84/13]	
		114.4±2.6	(298)	B	[82/20][60/9]	
C <sub>18</sub> H <sub>15</sub> PS	triphenylphosphine sulfide	136.8±6.1	(403)	HSA	[115-86-6]	
		142.8±6.8	(298)		[89/23]	
C <sub>20</sub> H <sub>20</sub> NP	N-ethyl triphenylphosphine imine	75.3±8.4	(298)		[3878-45-3]	
C <sub>21</sub> H <sub>42</sub> N <sub>3</sub> PS <sub>6</sub>	<i>tris</i> (dipropylidithiocarbamate)phosphorous	127.4±4.2		DSC,E	[47182-04-7]	
C <sub>28</sub> H <sub>28</sub> P	1,4- <i>bis</i> (diphenylphosphino)butane	171.6±2.5	(443)	B	[82/20][60/10]	
C <sub>27</sub> H <sub>54</sub> N <sub>3</sub> PS <sub>6</sub>	<i>tris</i> (diisobutylidithiocarbamate)phosphorous	138±3		DSC,E	[99/34]	
PH <sub>3</sub>	phosphine				[7688-25-7]	
PBr <sub>3</sub> S	(129–140)	17.2		MM	[37/3]	
	thiophosphoryl bromide				[41/1]	
P <sub>3</sub> Cl <sub>6</sub> N <sub>3</sub>	phosphonitrilic chloride (trimer)	61.2	(291)	GSM	[940-71-6]	
P <sub>3</sub> F <sub>6</sub> N <sub>3</sub>	phosphonitrilic fluoride (trimer)	76.1			[43/6]	
		(273–300)		T	[15599-91-4]	
P <sub>4</sub> F <sub>8</sub> N <sub>4</sub>	phosphonitrilic fluoride (tetramer)	53.6		ME	[58/15]	
		(273–298)			[58/19]	
Pb	<i>bis</i> (1,1,5,5-hexafluoro-2,4-pentanedionato)lead(II)	58.2		T	[14700-00-6]	
		(368–413)	102.4±5.0		[58/19]	
C <sub>10</sub> H <sub>14</sub> O <sub>4</sub> Pb	<i>bis</i> (2,4-pentanedionato)lead(II)	87.0		LE	[97/35]	
C <sub>10</sub> H <sub>20</sub> N <sub>2</sub> PbS <sub>4</sub>	<i>bis</i> (diethyldithiocarbamate)lead complex	111.7±1.3		GS	[19648-88-5]	
		(444–482)	129.9±2.5		[97/35]	
C <sub>12</sub> H <sub>10</sub> Br <sub>2</sub> Pb	diphenyl lead dibromide				[15282-88-9]	
C <sub>16</sub> H <sub>20</sub> F <sub>6</sub> O <sub>4</sub> Pb	<i>bis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)lead(II)	141.8±0.8	(298)	ME	[87/4][78/12]	
		(393–463)	117.5±2.8		[3134-29-6]	
C <sub>18</sub> H <sub>12</sub> N <sub>2</sub> PbO <sub>2</sub>	<i>bis</i> (8-hydroxyquinolinato)lead(II)				[21751-12-2]	
C <sub>18</sub> H <sub>15</sub> BrPb	triphenyl lead bromide	187.1±6.2	(298)	ME	[88/16][76/15]	
		(298–398)	134.7±3.3		[894-06-4]	
C <sub>18</sub> H <sub>15</sub> IPb	triphenyl lead iodide				[88/16][76/15]	
C <sub>20</sub> H <sub>20</sub> F <sub>14</sub> O <sub>4</sub> Pb	<i>bis</i> (6,6,7,7,8,8-heptafluoro-2,2-dimethyl-3,5-octanedionato)lead(II)	130.1±0.4	(298)	ME	[894-07-5]	
		75			[21600-78-2]	
C <sub>22</sub> H <sub>38</sub> O <sub>4</sub> Pb	<i>bis</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)lead(II)	117.5±2.8		GS	[92/9]	
		(373–398)	66.9		[21319-43-7]	
C <sub>24</sub> H <sub>20</sub> Pb	tetraphenyl lead	86		LE	[97/35]	
		74.1			[92/9]	
(412–474)		151	(446)	ME	[73/18]	
		159±1	(298)	ME,TE	[595-89-1]	
(412–480)					[87/4]	
					[77/19]	

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
		194.6±6.3	(298)	E	[82/20][72/20]
	(298–316)	U 80.2	(298)	ME	[62/6]
		82.8	(298)		[72/22]
C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Pb	lead(II) phthalocyanine	156.3		TGA	[15187-16-3]
	(542–663)	195.7			[95/35]
PbF <sub>2</sub>	lead(II) fluoride	267.8			[84/7]
PbI <sub>2</sub>	lead(II) iodide				[7783-46-2]
	(598–640)	173.1±1.6	(298)	ME	[71/27]
	(474–582)	167.7±1.3	(298)	MS	[96/23][85/14]
	(900–1150)	182.5±1.0	(298)		[96/23][79/26]
	(563–613)	165.2±1.8	(298)	ME	[96/23][64/7]
	(579–650)	166.4±1.0	(298)	ME	[96/23][39/1]
	(923–1073)	165.5±3.0	(298)	GS	[96/23][29/1]
PbSe	lead selenide				[12069-00-0]
	(835–1047)	226±1		TE	[93/20]
Pd					
C <sub>10</sub> H <sub>2</sub> F <sub>12</sub> O <sub>4</sub> Pd	bis(1,1,1,5,5-hexafluoro-2,4-pentanedionato)palladium(II)				[64916-48-9]
	(293–313)	84.6±1.6		ME	[00/29]
C <sub>8</sub> H <sub>10</sub> Pd	(cyclopentadienyl)allyl palladium				[1271-03-0]
	(291–333)	49.9	(312)		[87/4][76/18]
C <sub>10</sub> H <sub>8</sub> F <sub>6</sub> O <sub>4</sub> Pd	bis(1,1,1-trifluoro-2,4-pentanedionato)palladium(II)				[63742-52-9]
	(332–378)	115.2±1.4		ME	[00/29]
	(423–448)	105.0±0.8		GS	[85/16]
C <sub>10</sub> H <sub>10</sub> F <sub>6</sub> N <sub>2</sub> O <sub>2</sub> Pd	bis(1,1,1-trifluoro-4-imino-2-pantanone)palladium(II)				[203874-01-5]
	(332–386)	110.9±0.7		ME	[00/29]
C <sub>10</sub> H <sub>14</sub> O <sub>4</sub> Pd	bis(2,4-pentanedionato)palladium(II)				[14024-61-4]
	(347–416)	130.1±2.8		ME	[00/29]
	(330–394)	122.7±8.6	(298)		[91/17]
	(363–393)	127.6±17	(378)	ME	[84/12]
		132±17	(298)		[84/12]
C <sub>10</sub> H <sub>20</sub> N <sub>2</sub> PdS <sub>4</sub>	bis(diethyldithiocarbamate)palladium(II)				[15170-78-2]
		153.1±1.9			[99/37]
C <sub>16</sub> H <sub>20</sub> F <sub>6</sub> O <sub>4</sub> Pd	bis(1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)palladium(II)				[77964-87-5]
	(315–357)	131.4±1.9		ME	[00/29]
C <sub>16</sub> H <sub>20</sub> F <sub>6</sub> O <sub>6</sub> Pd	bis(1,1-dimethyl-1-methoxy-5,5,5-trifluoro-2,4-pentanedionato)-palladium(II)				[301198-67-4]
	(315–369)	113.8±1.2		ME	[00/29]
C <sub>18</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub> Pd	bis(8-hydroxyquinolinato)palladium(II)				[14638-30-3]
	(483–503)	158.5±4	(493)	ME	[84/12]
		168±4	(298)		[84/12]
C <sub>20</sub> H <sub>12</sub> F <sub>6</sub> O <sub>4</sub> Pd	bis(4,4,4-trifluoro-1-phenyl-1,3-butanedionato)palladium(II)				[85159-01-9]
	(386–452)	148.6±1.4		ME	[00/29]
C <sub>20</sub> H <sub>18</sub> O <sub>4</sub> Pd	bis(1-phenyl-1,3-butanedionato)palladium(II)				[15186-07-9]
	(410–471)	152.9±1.4		ME	[00/29]
C <sub>22</sub> H <sub>38</sub> O <sub>4</sub> Pd	bis(2,2,6,6-tetramethyl-2,4-heptanedionato)palladium(II)				[15214-66-1]
	(343–401)	125.4±1.4		ME	[00/29]
C <sub>44</sub> H <sub>28</sub> N <sub>4</sub> Pd	5,10,15,20-tetraphenylporphine palladium(II)				[76775-77-4]
		207±5		GS	[00/36]
Pm					
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Pm	tris(2,2,6,6-tetramethylheptane-3,5-dionato)promethium(III)				[67840-53-3]
	(433–463)	131.8			[79/29]
Pr					
C <sub>15</sub> H <sub>15</sub> Pr	tris(cyclopentadienyl)praseodymium				[11077-59-1]
		125.5±3.0	(298)		[82/20][74/23]
	(533–653)	113.0±1.7			[73/31]
	(338–438)	131.0±2.1		ME	[71/32][71/33]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Pr	tris(2,2,6,6-tetramethylheptane-3,5-dionato)praseodymium(III)				[15492-48-5]
		104.3±2.6			[96/31][00/16]
		163.0±3.6		DSC	[93/26][00/16]
	(383–423)	178.7	(403)	ME	[81/21]
	(450–495)	165.4	(473)	BG	[69/19]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> O <sub>8</sub> NaPr	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)-praseodymate (423–483)	155±2	(453)	T [93/4]
PrBr <sub>3</sub>	praseodymium(III) bromide	288±4 306±4 292	(900) (298) (298)	TE [13536-53-3] [00/27] [00/27] [00/27]
PrCl <sub>3</sub>	praseodymium(III) chloride	317±4 340±4 324	(1000) (298) (298)	TE [10361-79-2] [00/27] [00/27] [00/27]
PrI <sub>3</sub>	praseodymium(III) iodide	263±4 280±4 275	(900) (298) (298)	TE [13813-23-5] [00/27] [00/27] [00/27]
Pt				
C <sub>8</sub> H <sub>14</sub> Pt	cyclopentadienyltrimethylplatinum	77.8±2.0	(298)	[1271-07-4] [82/20][77/21]
C <sub>10</sub> H <sub>14</sub> O <sub>4</sub> Pt	<i>bis</i> (2,4-pentanedionato)platinum(II) (363–383)	129.4±9 133±9	(373) (298)	ME [15170-57-7] [84/12] [84/12]
C <sub>10</sub> H <sub>20</sub> N <sub>2</sub> PtS <sub>4</sub>	<i>bis</i> (diethyldithiocarbamate)platinum(II)	157.1±2.0		[15730-38-8] [99/37]
C <sub>12</sub> H <sub>16</sub> Pt	dicyclopentadienydimethylplatinum	83.7±3.5	(298)	[42613-14-9] [82/20][77/21]
Pu				
C <sub>40</sub> H <sub>40</sub> F <sub>28</sub> O <sub>8</sub> Pu	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)plutonium(IV) (349–363)	153.5±7.9	(356)	ME [28041-99-8] [70/23]
Rb				
C <sub>5</sub> H <sub>9</sub> O <sub>2</sub> Rb	rubidium pivalate	167.1±5.6		[70205-79-7] [98/31]
Re				
C <sub>4</sub> H <sub>6</sub> Br <sub>4</sub> O <sub>4</sub> Re <sub>2</sub>	<i>bis</i> (μ-acetato)tetrabromodirhenium stereoisomer			[75027-96-2]; [75081-56-0]
<i>cis</i>	(410–510)	66.6		[84/36]
<i>trans</i>	(410–510)	59.9		[84/36]
C <sub>4</sub> H <sub>6</sub> Cl <sub>4</sub> O <sub>4</sub> Re <sub>2</sub>	<i>bis</i> (μ-acetato)tetrachlorodirhenium stereoisomer			[62320-69-8]; [100495-10-1]
<i>cis</i>	(450–560)	72.8		[84/36]
<i>trans</i>	(450–560)	64.7		[84/36]
C <sub>5</sub> BrO <sub>5</sub> Re	bromopentacarbonylrhenium	92.1±2		[14220-21-4] [83/21]
C <sub>5</sub> ClO <sub>5</sub> Re	chloropentacarbonylrhenium	110.9±2		[14099-01-5] [83/21]
C <sub>5</sub> HO <sub>5</sub> Re	rhenium hydride pentacarbonyl complex (279–369)	45.1	(324)	[16457-30-0] [87/4]
C <sub>6</sub> H <sub>3</sub> O <sub>5</sub> Re	rhenium methylpentacarbonyl complex (315–380)	65.2 70.0±2 65.3±1.0	(347.5) (298) (298)	C [14524-92-6] [87/4][60/22] [82/20][74/25]
C <sub>10</sub> O <sub>10</sub> Re <sub>2</sub>	(313–383) dirhenium decacarbonyl	64.9 100.9±2 93.3±4.2 (363–450) 77.6 79.5		[58/7] [14285-68-8] [83/21] [82/20][74/25] [71/20] [61/10][71/20]
Rh				
C <sub>7</sub> H <sub>7</sub> O <sub>4</sub> Rh	dicarbonyl-2,4-pentanedionatorhodium complex (276–301)	87±2.9	(289)	ME [14874-82-9] [78/20][87/4]
C <sub>9</sub> H <sub>13</sub> Cl <sub>2</sub> O <sub>2</sub> Rh	<i>bis</i> (chloroethylene)-2,4-pentanedionatorhodium complex (275–288)	117.2±7.1	(281)	ME [12282-04-1] [78/20][87/4]
C <sub>9</sub> H <sub>15</sub> O <sub>2</sub> Rh	<i>bis</i> (ethylene)-2,4-pentanedionatorhodium complex (282–301)	97.9±7.1	(292)	ME [12082-47-2] [78/20][87/4]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)		Method	Reference
C <sub>10</sub> H <sub>14</sub> O <sub>4</sub> Rh	bis(2,4-pentanedionato)rhodium(II)			[69047-66-1]
	(383–447)	NA		[94/34]
		173.2±7.0	(298)	[91/17]
C <sub>11</sub> H <sub>19</sub> O <sub>2</sub> Rh	bis(propylene)-2,4-pentanedionatorhodium complex			[12282-38-1]
	(270–296)	86.2±1.7	(283)	[78/20][87/4]
C <sub>13</sub> H <sub>19</sub> O <sub>6</sub> Rh	bis(vinylacetate)-2,4-pentanedionatorhodium complex			[31724-87-5]
	(309–328)	121.3±3	(319)	[78/20]
C <sub>13</sub> H <sub>19</sub> O <sub>6</sub> Rh	bis(methyl acrylate)-2,4-pentanedionatorhodium complex			[31724-88-6]
	(311–327)	111.7±4.6	(319)	[78/20]
C <sub>16</sub> O <sub>16</sub> Rh <sub>6</sub>	hexarhodiumhexadecacarbonyl			[28407-51-4]
		117.2±20.0	(298)	[82/20][75/25]
Ru				
C <sub>10</sub> H <sub>10</sub> Ru	bis(cyclopentadienyl)ruthenium			[1287-13-4]
	(383–479)	76.2±1.4		[84/31]
		82.7±1.7	(298)	[84/31]
		77.6±1.6		[67/17]
C <sub>10</sub> H <sub>14</sub> O <sub>4</sub> Ru	bis(2,4-pentanedionato)ruthenium(II)			[71263-16-6]
	(398–413)	139.7±2.5	(406)	ME
		145.1±2.5	(298)	ME
C <sub>15</sub> H <sub>3</sub> F <sub>18</sub> O <sub>6</sub> Ru	tris(1,1,1,5,5-hexafluoro-2,4-pentanedionato)ruthenium(III)			[16827-63-7]
	(299–313)	114.1±1.0	(306)	ME
		114.5±1.0	(298)	ME
C <sub>15</sub> H <sub>12</sub> F <sub>9</sub> O <sub>6</sub> Ru	tris(1,1,1-trifluoro-2,4-pentanedionato)ruthenium(III)			[16702-38-8]
	(350–369)	126.8±1.0	(360)	ME
		129.9±1.0	(298)	ME
	(383–423)	90.0±3.0		[96/30]
C <sub>15</sub> H <sub>21</sub> O <sub>6</sub> Ru	tris(2,4-pentanedionato)ruthenium(III)			[14284-93-6]
	(423–493)	127.0±0.9		[96/30]
S				
H <sub>2</sub> S	hydrogen sulfide			[7783-06-4]
	(128–142)	22.5	(135)	MG
	(165–188)	22.5	(176)	
SF <sub>6</sub>	sulfur hexafluoride			[2551-62-4]
		23.2±0.01	(186)	[94/23]
	(175–207)	23.3	(191)	[32/2]
Sb				
C <sub>15</sub> H <sub>30</sub> N <sub>3</sub> S <sub>6</sub> Sb	tris(N,N-diethyldithiocarbamate)antimony(III)			[22914-48-3]
		160±2	(298)	[94/31]
C <sub>18</sub> H <sub>15</sub> Sb	triphenylantimony			[603-36-1]
		106.3±8.4	(298)	[82/20][60/11]
C <sub>21</sub> H <sub>42</sub> N <sub>3</sub> S <sub>6</sub> Sb	tris(dipropylidithiocarbamate)antimony(III)			[226980-30-9]
		169.5±6.1		[99/34]
C <sub>27</sub> H <sub>54</sub> N <sub>3</sub> S <sub>6</sub> Sb	tris(N,N-dibutylidithiocarbamate)antimony(III)			[14907-93-8]
		179±3	(298)	[94/31]
C <sub>27</sub> H <sub>54</sub> N <sub>3</sub> S <sub>6</sub> Sb	tris(N,N-diisobutylidithiocarbamate)antimony(III)			[41594-79-0]
		157±3	(298)	[97/31]
Sc				
C <sub>15</sub> H <sub>3</sub> F <sub>18</sub> O <sub>6</sub> Sc	tris(1,1,1,5,5-hexafluoro-2,4-pentadionato)scandium(III)			[18990-42-6]
	(333–363)	55		[00/35]
	(313–348)	60.2±1.2	I	[78/26]
C <sub>15</sub> H <sub>12</sub> F <sub>9</sub> O <sub>6</sub> Sc	tris(1,1,1-trifluoro-2,4-pentadionato)scandium(III)			[14634-68-5]
	(373–403)	78	TGA	[00/35]
	(363–433)	117.6±1.7		[85/16]
	(366–413)	53.2±1.0	I	[78/26]
C <sub>15</sub> H <sub>15</sub> Sc	tris(cyclopentadienyl)scandium			[1298-54-0]
		97.1±3.5	(298)	[82/20][74/23]
C <sub>15</sub> H <sub>21</sub> O <sub>6</sub> Sc	tris(2,4-pentanedionato)scandium(III)			[14284-94-7]
	(413–443)	95	TGA	[00/35]
	(393–453)	58.2±0.8	I	[78/26]
		99.6±0.8	(298)	HSA [70/9][70/17]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Sc	tris(2,2,6,6-tetramethylheptane-3,5-dionato)scandium(III)			[15492-49-6]
	(413–443)	90	TGA	[00/35]
		79.6±2.4		[97/3]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
Se				
CS <sub>2</sub>	carbon diselenide (218–229)	46.3	(224)	[506-80-9] [87/4][66/12]
C <sub>4</sub> H <sub>4</sub> N <sub>2</sub> O <sub>2</sub> Se	selenobarbituric acid (449–486)	141±4.0	(466)	TE [92754-59-1] [99/6]
C <sub>4</sub> H <sub>4</sub> Se	selenophene (208–243)	47.1	(225)	[288-05-1] [51/17]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> Se	4-phenyl-1,2,3-selenadiazole (275–343)	91.2±1.7 94.1±0.8	(309) (298)	ME GS [25660-64-4] [74/5] [73/25]
	(327–345)	90.7	(336)	[87/4]
C <sub>12</sub> H <sub>12</sub> Se <sub>2</sub>	diphenyl diselenide (302–324)	116.7±2.5	(313)	ME [1666-13-3] [80/33]
C <sub>14</sub> H <sub>14</sub> Se <sub>2</sub>	dibenzyl diselenide (291–330)	130.5		ME [1482-82-2] [74/5][73/25]
SeF <sub>6</sub>	selenium hexafluoride (194–226)	24.96±0.04 23.5	(205) (210)	C [96/22] [32/2]
Si				
(CH <sub>3</sub> Cl <sub>3</sub> Si)–2(C <sub>6</sub> H <sub>15</sub> N <sub>3</sub> )	bis-1,3,5-trimethyl-1,3,5-triaza-cyclohexane-methyltrichlorosilane (298–354)	74.0±2.8		[84/5]
CH <sub>3</sub> NSi	isocyanato silane (253–304)	48.8	(279)	[18081-38-4] [87/4][56/16]
C <sub>2</sub> H <sub>3</sub> F <sub>3</sub> O <sub>2</sub> Si	silyl trifluoroacetate (273–293)	30.7 (liq)	(283)	[6876-44-4] [87/4][67/20]
C <sub>2</sub> H <sub>9</sub> NSi	dimethylaminosilane (228–264)	58.8	(246)	[2875-98-1] [87/4][54/11]
C <sub>6</sub> H <sub>18</sub> O <sub>3</sub> Si <sub>3</sub>	hexamethylcyclotrisiloxane (297–335)	55.2±0.4	(316)	[541-05-9] [53/11]
C <sub>7</sub> H <sub>15</sub> NO <sub>3</sub> Si	1-methyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 82±0.8			[2288-13-3] [89/12]
C <sub>8</sub> H <sub>15</sub> NO <sub>3</sub> Si	1-ethenyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 85±0.8			[2097-18-9] [89/12]
C <sub>8</sub> H <sub>17</sub> NO <sub>3</sub> Si	1-ethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 81±0.9			[2097-16-7] [89/12]
C <sub>8</sub> H <sub>17</sub> NO <sub>3</sub> Si	1,7-dimethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 92±0.8			[18225-19-9] [89/12]
C <sub>8</sub> H <sub>17</sub> NO <sub>4</sub> Si	1-ethoxy-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 81±0.8			[3463-21-6] [89/12]
C <sub>8</sub> H <sub>24</sub> O <sub>4</sub> Si <sub>4</sub>	octamethylcyclotetrasiloxane	64±2		B [556-67-2] [53/11][60/1] [70/1]
C <sub>8</sub> H <sub>24</sub> O <sub>12</sub> Si <sub>8</sub>	octamethyl-dodecaoxooctasilicon			[57348-79-5]
	(463–563)	110.5	(513)	[87/4][75/29]
C <sub>9</sub> H <sub>19</sub> NO <sub>3</sub> Si	1-propyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 84±0.8			[26053-77-0] [89/12]
C <sub>9</sub> H <sub>19</sub> NO <sub>3</sub> Si	1-(1-methylethyl)-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 92±0.9			[2097-17-8] [89/12]
C <sub>9</sub> H <sub>19</sub> NO <sub>3</sub> Si	1,3,7-trimethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 101±0.8			[56492-01-4] [89/12]
C <sub>10</sub> H <sub>21</sub> NO <sub>3</sub> Si	1,3,7,10-tetramethyl-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 115±0.9			[71229-51-1] [89/12]
2(C <sub>6</sub> H <sub>15</sub> N <sub>3</sub> )·Cl <sub>4</sub> Si	bis-1,3,5-trimethyl-1,3,5-triaza-cyclohexane-tetrachlorosilane (298–354)	76.1±4.6		[84/5]
C <sub>12</sub> H <sub>36</sub> Si <sub>5</sub>	tetrakis(trimethylsilyl)silane	83.7±20.9	(298)	[4098-98-0] [82/20][72/18]
C <sub>13</sub> H <sub>19</sub> NO <sub>4</sub> Si	1-(2-phenoxyethyl)-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 108±0.8			[63071-93-2] [89/12]
C <sub>14</sub> H <sub>19</sub> NO <sub>5</sub> Si	2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane-1-methanol benzoate ester 109±0.9			[79791-55-2] [89/12]
C <sub>14</sub> H <sub>21</sub> NO <sub>3</sub> Si	1-(2-phenylethyl)-2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undecane 108±0.9			[63330-92-7] [89/12]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
				Reference
C <sub>15</sub> H <sub>21</sub> NO <sub>5</sub> Si	4-methylbenzoic acid 2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl ester	123±0.9		[100446-65-9]
C <sub>15</sub> H <sub>21</sub> NO <sub>6</sub> Si	4-methoxybenzoic acid 2,8,9-trioxa-5-aza-1-silabicyclo[3.3.3]undec-1-ylmethyl ester	143±0.9		[89/12] [94697-86-6]
C <sub>20</sub> H <sub>20</sub> OSi	ethoxytriphenylsilane	142.7±1.0		[1516-80-9]
C <sub>24</sub> H <sub>20</sub> Si	tetraphenylsilane (428–484)	51.2 156.9±1.7 149.4±1.7 51.0 51.0	(456) (298) (298) (298)	[88/27] [1048-08-4] [87/4] [78/24] ME,TE MG [74/12] [73/14] [72/22][86/17]
C <sub>24</sub> H <sub>20</sub> O <sub>4</sub> Si	tetraphenoxy silane	124.7±1.2		[1174-72-7] [88/27]
C <sub>32</sub> H <sub>16</sub> Cl <sub>2</sub> N <sub>8</sub> Si	silicon phthalocyanine dichloride	115.3±11.5		[19333-10-9] [72/31]
C <sub>36</sub> H <sub>30</sub> Si <sub>2</sub>	hexaphenyldisilane	209.2±2.1	(298)	[1450-23-3] [74/12]
SiCl <sub>4</sub>	silicon tetrachloride (175–204)	43.3±0.1		[10026-04-7] MG [64/12]
SiF <sub>4</sub>	silicon tetrafluoride (148–183)	25.8		[7783-61-1] [30/4]
F <sub>3</sub> H <sub>3</sub> Si <sub>2</sub>	1,1,1-trifluorodisilane (195–209)	39.2	(202)	[15195-26-3] [72/29]
Sm				
C <sub>15</sub> H <sub>15</sub> Sm	<i>tris</i> (cyclopentenyl)samarium(III) (513–633)	109.6±1.7		[1298-55-1] [73/31]
C <sub>15</sub> H <sub>21</sub> O <sub>6</sub> Sm	<i>tris</i> (2,4-pentanedionato)samarium(III) (293–413)	U 20±2		[14589-42-5] [85/18]
C <sub>30</sub> H <sub>30</sub> F <sub>21</sub> O <sub>6</sub> Sm	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)samarium(III) (379–394)	158.6±1.7	ME	[17631-69-5] [71/25]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Sm	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)samarium(III) (378–418) (430–468)	149.7±3.3 180.7 150.6	(298) (398) (447)	DSC ME BG [99/33] [81/21] [69/19]
Sn				
C <sub>16</sub> H <sub>18</sub> Sn	1,1-diphenylstannolane	106.8±5.5	(298)	B [88/11]
C <sub>17</sub> H <sub>20</sub> Sn	hexahydro-1,1-diphenylstannin	75.0±1.5(liq)	(298)	ME [88/11]
C <sub>20</sub> H <sub>18</sub> Sn	triphenyl vinyl tin	114.1		[2117-48-8] [85/12]
C <sub>24</sub> H <sub>20</sub> Sn	tetraphenyl tin (393–461)	151.7 161.1±4.2 (428–454) (393–461)	(427) (298) 152.5±0.6 151.8±1.1 59.5	TE ME [69/16] [69/16] [87/4] [82/20][69/18]
C <sub>27</sub> H <sub>20</sub> Sn	triphenyl phenylethylnyl tin (298–316)	U 66.0±21.2	(298)	ME [62/6][70/13] [1247-08-1] [85/12]
C <sub>32</sub> H <sub>16</sub> Cl <sub>2</sub> N <sub>8</sub> Sn	tin(IV) phthalocyanine dichloride	137.6		[18253-54-8]
C <sub>32</sub> H <sub>16</sub> N <sub>8</sub> Sn	tin(II) phthalocyanine	218.4±17.6	ME	[70/7] [15304-57-1]
C <sub>36</sub> H <sub>30</sub> Sn <sub>2</sub>	hexaphenyl ditin	123.4±10.0	ME	[70/7] [1064-10-4]
C <sub>44</sub> H <sub>26</sub> N <sub>8</sub> Sn	diphenyl tin(IV) phthalocyanine	188.3±4.2	ME,TE	[69/16] [219130-47-0]
SnBr <sub>4</sub>	tin(IV) bromide (257–299)	174.9±18.8 62.4	ME (278)	[70/7] [7789-67-5] [41/7]
SnI <sub>4</sub>	tin(IV) iodide			[7790-47-8]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
Sr	(366–414)	75.6	(390)		[41/7]
SrCl <sub>2</sub>	strontium chloride	328.9±4.8	(298)	LE	[10476-85-4] [65/17]
Ta					
C <sub>5</sub> H <sub>15</sub> O <sub>5</sub> Ta	tantalum pentamethoxide	88.3±13.4		ME,E	[865-35-0] [72/23][77/21]
TaBr <sub>5</sub>	tantalum(V) pentabromide	127±18	(298)		[13451-11-1] [96/25]
		121.9	(298)		[96/25][91/22]
TaI <sub>5</sub>	tantalum(V) pentaiodide	120.9			[14693-81-3] [78/30]
Tb					
C <sub>15</sub> H <sub>15</sub> Tb	<i>tris</i> (cyclopentadienyl)terbium(III)	103.8±1.7			[1272-25-9] [73/32]
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> NaO <sub>8</sub> Tb	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5-trifluoro-2,4-pentanedionato)-terbate				[12576-88-4]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Tb	(418–473)	163±3	(445)	T	[93/4] [15492-51-0]
	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)terbium(III)	138.4±2.6	(298)	DSC	[99/33]
	(373–420)	173.6	(396)	ME	[81/21]
	(420–433)	151.0	(426)	ME	[81/21]
	(420–454)	141.5	(437)	BG	[69/19]
Te					
TeCl <sub>4</sub>	tellurium tetrachloride	105±2	(298)		[10026-07-0] [94/32]
TeF <sub>6</sub>	tellurium hexafluoride	25.6	(214)		[7783-80-4] [32/2]
Th					
C <sub>20</sub> H <sub>16</sub> F <sub>12</sub> O <sub>8</sub> Th	<i>tetrakis</i> (1,1,1-trifluoropentane-2,4-dionato)thorium(IV)	154.6	(298)	GS,HA	[17500-72-0] [86/9]
C <sub>40</sub> H <sub>40</sub> F <sub>28</sub> O <sub>8</sub> Th α form	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)thorium (IV)	151.2	(298)	GS,HA	[23841-30-7] [86/9]
β form		130.6	(298)	GS,HA	[86/9]
C <sub>44</sub> H <sub>76</sub> O <sub>8</sub> Th	(344–367)	138.5±3.3	(355)	ME	[70/23]
	<i>tetrakis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)thorium(IV)	152.3±3.3	(400)	ME	[70/23]
Ti					
C <sub>2</sub> H <sub>3</sub> Cl <sub>4</sub> NTi	titanium trichloride–acetonitrile (1:1 complex)	29.4±5.0		T	[13682-81-0] [70/18]
C <sub>2</sub> H <sub>3</sub> Cl <sub>4</sub> NTi	titanium trichloride–acetonitrile (1:2 complex)	41.0±5.0		T	[15227-64-2] [70/18]
C <sub>4</sub> H <sub>8</sub> Cl <sub>4</sub> OTi	titanium trichloride–tetrahydrofuran (1:1 complex)	33.5±5.0		T	[15005-09-1] [70/18]
C <sub>4</sub> H <sub>8</sub> Cl <sub>4</sub> OTi	titanium trichloride–tetrahydrofuran (1:2 complex)	49.1±5.0		T	[31011-57-1] [70/18]
C <sub>4</sub> H <sub>8</sub> Cl <sub>4</sub> STi	titanium trichloride–tetrahydrothiophene (1:1 complex)	29.7±5.0		T	[14281-72-2] [70/18]
C <sub>4</sub> H <sub>8</sub> Cl <sub>4</sub> STi	titanium trichloride–tetrahydrothiophene (1:2 complex)	43.3±5.0		T	[16893-00-8] [70/18]
C <sub>5</sub> H <sub>5</sub> Cl <sub>3</sub> Ti	cyclopentadienyltitanium trichloride	89.8	(379)		[1270-98-0] [87/4]
	(354–404)	104.6±8.4	(298)		[82/20][77/21] [77/23]
		89.1±0.8			
C <sub>5</sub> H <sub>10</sub> Cl <sub>4</sub> OTi	titanium trichloride–tetrahydropyran (1:1 complex)	33.5±5.0		T	[22538-12-1] [70/18]
C <sub>5</sub> H <sub>10</sub> Cl <sub>4</sub> OTi	titanium trichloride–tetrahydropyran (1:2 complex)	73.0±5.0		T	[31011-56-0] [70/18]
C <sub>8</sub> H <sub>8</sub> Cl <sub>4</sub> OTi	titanium trichloride–acetophenone (1:1 complex)	39.1±5.0		T	[31011-60-6] [70/18]
C <sub>8</sub> H <sub>8</sub> Cl <sub>4</sub> OTi	titanium trichloride–acetophenone (1:2 complex)	66.4±5.0		T	[31011-61-7] [70/18]
C <sub>13</sub> H <sub>10</sub> Cl <sub>4</sub> OTi	titanium trichloride–benzophenone (1:1 complex)				[23368-15-2]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
Molecular formula/polymorph	Temperature range (K)		Method	Reference	
C <sub>13</sub> H <sub>10</sub> Cl <sub>4</sub> OTi	titanium trichloride–benzophenone (1:2 complex)	59.6±5.0 68.8±5.0	T	[70/18] [31011-63-9]	
C <sub>10</sub> H <sub>10</sub> Ti	<i>bis</i> (cyclopentadienyl)titanium	58.5±8.0	T	[70/18] [1271-29-0]	
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> Ti	<i>bis</i> (cyclopentadienyl)titanium dichloride	124.4±2.9 (418–533) 124.4 118.8±2.1 111.7±1.7 96.2 102±13	(298) (475.5) (298) (298)	ME	[01/3] [87/4] [82/20][77/21] [1271-19-8]
C <sub>12</sub> H <sub>10</sub> O <sub>2</sub> Ti	<i>bis</i> (cyclopentadienyl)dicarbonyl titanium	84.2±3.5	(298)	ME	[12129-51-0] [87/18]
C <sub>12</sub> H <sub>16</sub> Ti	<i>bis</i> (cyclopentadienyl)dimethyltitanium	79.5±8.4	(298)		[1271-66-5] [82/20][77/21]
C <sub>14</sub> H <sub>10</sub> F <sub>6</sub> O <sub>4</sub> Ti	<i>bis</i> (cyclopentadienyl)titanium <i>bis</i> (trifluoroacetate)	108.0±8.0	(298)		[1282-45-7] [82/20][81/17]
C <sub>22</sub> H <sub>20</sub> Ti	<i>bis</i> (cyclopentadienyl)diphenyltitanium	88±8			[1273-09-2] [82/22]
C <sub>24</sub> H <sub>20</sub> O <sub>4</sub> Ti	<i>bis</i> (benzoato) <i>bis</i> (η <sup>5</sup> -2,4-cyclopentadien-1-yl)titanium	112±8			[12156-48-8] [81/17]
C <sub>24</sub> H <sub>24</sub> Ti	<i>bis</i> (cyclopentadienyl)dibenzyltitanium	83.7±8.4	(298)		[See Note] [82/20][77/21]
	[Note: There is no reference to [77/21] in <i>Chemical Abstracts</i> under the given chemical name. Rather, <i>Chemical Abstracts</i> lists the paper under <i>bis</i> (cyclopentadienyl)diphenyltitanium.]				
C <sub>30</sub> H <sub>28</sub> Fe <sub>2</sub> Ti	<i>bis</i> (cyclopentadienyl)diferrocenyl titanium	150±15		[65274-19-3] [82/22]	
TiBr <sub>4</sub>	titanium(IV) tetrabromide			[7789-68-6]	
	(283–306)	62.4	294	[41/7]	
TiF <sub>3</sub>	titanium(III) fluoride			[13470-08-1]	
	(759–865)	237.2±1.7	(810)	[67/13]	
Tl					
C <sub>3</sub> H <sub>9</sub> Tl	trimethyl thallium			[3003-15-4]	
	(258–304)	57.3	(285)	[65/13][87/4]	
TlF	thallium(I) fluoride			[7789-27-7]	
		142.7	(298)	[67/14]	
Tm					
C <sub>15</sub> H <sub>15</sub> Tm	<i>tris</i> (cyclopentadienyl)thulium	111.3±3.5 98.7±1.7	(298)	[1272-26-0] [82/20][74/23]	
	(338–438)	109.2±2.1		[73/32]	
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Tm	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)thulium(III)	131.3±2.9	(298)	[71/32][71/33] [15631-58-0]	
	(363–418)	156.1	(390)	[99/33] [81/21]	
	(410–446)	131.4	(428)	[69/19]	
U					
C <sub>6</sub> H <sub>18</sub> O <sub>6</sub> U	uranium hexamethoxide	102.9±8.4		[69644-82-2] [91/23]	
C <sub>10</sub> H <sub>2</sub> F <sub>12</sub> O <sub>6</sub> U	<i>bis</i> (1,1,5,5-hexafluoro-2,4-pentanedionato)uranium dioxide complex	147	(397.5)	[67316-66-9] [87/4]	
	(370–425)	147±4		[78/28]	
C <sub>15</sub> H <sub>15</sub> ClU	<i>tris</i> (cyclopentadienyl)uranium chloride			[11087-14-2]	
	(338–348)	115.9±2.1		[71/32][71/33]	
C <sub>16</sub> H <sub>16</sub> U	<i>bis</i> (cyclooctatetraene)uranium	107.9±3.3 (400–500)		[79/31][77/26] [79/31][77/26]	
		114.2±4.8	(298)		
C <sub>20</sub> H <sub>20</sub> F <sub>30</sub> O <sub>10</sub> U <sub>2</sub>	<i>bis</i> [pentakis(trifluoroethoxy)]diuranium	NA		[137220-74-7] [91/19]	
C <sub>20</sub> H <sub>22</sub> Cl <sub>2</sub> F <sub>12</sub> O <sub>6</sub> U	<i>bis</i> (1,1,5,5-hexafluoro-2,4-pentanedionato)dichlorouranium- <i>bis</i> (tetrahydropyran)	79.1	(352)	T	[136211-24-0] [91/16]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number
Molecular formula/polymorph	Temperature range (K)			Method
				Reference
C <sub>20</sub> H <sub>28</sub> O <sub>8</sub> U	<i>tetrakis</i> (pentane-2,4-dionato)uranium(IV) 148.1±4.6			[65137-03-3]
C <sub>22</sub> H <sub>38</sub> O <sub>6</sub> U	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dionato)dioxouranium (370–412) 151.6±1.9 156.9±1.9 126±9	(404) (298)	ME	[91/23] [50707-86-9] [93/2] [93/2] [78/28]
C <sub>40</sub> H <sub>40</sub> F <sub>28</sub> O <sub>8</sub> U	<i>tetrakis</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione) uranium(IV) 68.2 64.3±3.2 (343–367) 143.5±1.3 (355)	BG C	[77/27] [77/27]	
C <sub>40</sub> H <sub>68</sub> O <sub>12</sub> U	<i>tetrakis</i> (2,6-dimethyl-2-methoxy-3,5-heptanedionato)uranium(IV) (344–377) 121.7±18 (350)	ME	[70/23] [133952-93-9]	
C <sub>44</sub> H <sub>76</sub> O <sub>8</sub> U	<i>tetrakis</i> (2,2,6,6-tetramethyl-3,5-heptanedionato)uranium(IV) (372–478) 152.2±3.3 (425)	ME	[77/29]	
C <sub>44</sub> H <sub>76</sub> O <sub>12</sub> U	<i>tetrakis</i> (2,6,6-trimethyl-2-methoxy-3,5-heptanedionato)uranium(IV) (387–428) 160.7±6.3 (408)	ME	[70/23] [133952-92-8]	
V				
C <sub>10</sub> H <sub>8</sub> F <sub>6</sub> O <sub>5</sub> V	<i>bis</i> (1,1,1-trifluoro-2,4-pentanedionato)oxovanadium(IV) (423–473) 119.7±0.8			[52081-94-4] [85/16]
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> V	<i>bis</i> (cyclopentadienyl)vanadium dichloride	140.1±7.4 (298)	ME	[12083-48-6] [01/3]
C <sub>10</sub> H <sub>10</sub> V	<i>bis</i> (cyclopentadienyl)vanadium (323–338) 57.4 58.6±4.2	(330.5) (298)		[1277-47-0] [87/4] [82/20][71/22]
C <sub>10</sub> H <sub>14</sub> O <sub>5</sub> V	<i>bis</i> (2,4-pentanedionato)oxovanadium(IV) (418–443) 140.7±4.0 91.5 140.4±1.1	(493) (430.5) (298)	DSC	[3153-26-2] [87/14] [87/4] [86/13]
C <sub>10</sub> H <sub>17</sub> NO <sub>5</sub> V	amine <i>bis</i> (pentane-2,4-dionato)oxovanadium 29.0	(370)	DSC	[122343-53-7] [89/22]
C <sub>12</sub> H <sub>12</sub> V	<i>bis</i> (benzene)vanadium 70±10			[12129-72-5] [82/20]
C <sub>14</sub> H <sub>16</sub> V	benzene(ethylbenzene)vanadium (453–483) 69.5	(468)		[36955-47-2] [72/30]
C <sub>15</sub> H <sub>12</sub> F <sub>9</sub> O <sub>6</sub> V	<i>tris</i> (1,1,1-trifluoro-2,4-pentanedionato)vanadium(III) (383–433) 118.4±2.1			[15695-88-2] [85/16]
C <sub>15</sub> H <sub>18</sub> V	benzene(isopropylbenzene)vanadium (453–483) 83.7	(468)		[36955-49-4] [72/30]
C <sub>15</sub> H <sub>18</sub> BrNO <sub>5</sub> V	3-bromopyridine <i>bis</i> (acetylacetone)oxovanadium 59.4	(402)	DSC	[24263-16-9] [89/22]
C <sub>15</sub> H <sub>19</sub> NO <sub>5</sub> V	pyridine <i>bis</i> (acetylacetone)oxovanadium 47.8	(404)	DSC	[24263-31-8] [89/22]
C <sub>15</sub> H <sub>21</sub> O <sub>6</sub> V	<i>tris</i> (2,4-pentanedionato)vanadium(III) 102.9±0.8	(298)	HSA	[13476-99-8] [70/9][70/17]
C <sub>16</sub> H <sub>18</sub> N <sub>2</sub> O <sub>5</sub> V	3-cyanopyridine <i>bis</i> (acetylacetone)oxovanadium 79.0	(391)	DSC	[24263-13-6] [89/22]
C <sub>16</sub> H <sub>18</sub> N <sub>2</sub> O <sub>5</sub> V	4-cyanopyridine <i>bis</i> (acetylacetone)oxovanadium 75.6	(399)	DSC	[24263-14-7] [89/22]
C <sub>16</sub> H <sub>21</sub> NO <sub>5</sub> V	4-methylpyridine <i>bis</i> (acetylacetone)oxovanadium 56.9	(421)	DSC	[24263-33-0] [89/22]
C <sub>16</sub> H <sub>20</sub> V	<i>bis</i> (ethylbenzene)vanadium (453–483) 72.0	(468)		[36955-48-3] [72/30]
C <sub>18</sub> H <sub>24</sub> V	<i>bis</i> (isopropylbenzene)vanadium (453–483) 86.2	(468)		[36472-53-4] [72/30]
W				
C <sub>6</sub> O <sub>6</sub> W	tungsten hexacarbonyl (265–288) (338–423) (333–433) (250–292)	77.7 74.9±1.3 74.4 78.9±1.1 73.2	TE (276) (348) (271) (298)	[14040-11-0] [95/36] [93/28] [87/4] [80/34][79/19] [75/20]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method	CAS registry number
Molecular formula/polymorph	Temperature range (K)				Reference
		76.5±1.3			[75/22]
	(339–410)	69.7			[52/7]
		74.1			[35/2]
C <sub>7</sub> H <sub>3</sub> NO <sub>5</sub> W	acetonitrile tungsten pentacarbonyl				[15096-68-1]
	(271–303)	98.1±2.0	(298)		[80/31]
C <sub>8</sub> H <sub>4</sub> N <sub>2</sub> O <sub>5</sub> W	pyrazole(pentacarbonyl)tungsten				[39017-11-3]
	(287–327)	112.5±2.4	(307)	ME	[79/19]
C <sub>8</sub> H <sub>6</sub> N <sub>2</sub> O <sub>4</sub> W	bis(acetonitrile)tetracarbonyltungsten				[16800-45-6]
	(294–313)	131.0±6.0	(298)		[80/31]
C <sub>8</sub> H <sub>9</sub> NO <sub>5</sub> W	trimethylamine(pentacarbonyl)tungsten				[15228-32-7]
		89.1±2.1			[79/19][80/32]
					[80/34]
C <sub>8</sub> H <sub>9</sub> O <sub>5</sub> PW	trimethylphosphine(pentacarbonyl)tungsten				[26555-11-3]
	(283–327)	93.8±1.5	(305)	ME	[80/34]
C <sub>9</sub> H <sub>4</sub> N <sub>2</sub> O <sub>5</sub> W	pyrazine(pentacarbonyl)tungsten				[65761-19-5]
	(287–321)	108.4±1.3	(304)	ME	[79/19]
C <sub>9</sub> H <sub>4</sub> N <sub>2</sub> O <sub>5</sub> W	pyridazine(pentacarbonyl)tungsten				[65761-20-8]
		106.4±2.5			[79/19][80/32]
					[80/34]
C <sub>9</sub> H <sub>9</sub> N <sub>3</sub> O <sub>3</sub> W	tris(acetonitrile) tungsten tricarbonyl				[16800-47-8]
	(308–333)	103.4±6.0	(298)		[80/31]
C <sub>10</sub> H <sub>5</sub> NO <sub>5</sub> W	pyridine(pentacarbonyl)tungsten				[14586-49-3]
	(285–313)	109.7±2.7	(299)	ME	[79/19]
C <sub>10</sub> H <sub>8</sub> O <sub>3</sub> W	cycloheptatrieneturgentricarbonyl				[12128-81-3]
		92.0	(298)	C	[77/22][82/20]
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> W	dichlorobis( $\eta^5$ -2,4-cyclopentadien-1-yl)tungsten				[12184-26-8]
		120.7±8.6	(298)	ME	[01/3]
		104.6±4.2			[76/20]
C <sub>10</sub> H <sub>10</sub> I <sub>2</sub> W	bis( $\eta^5$ -2,4-cyclopentadien-1-yl)diiodotungsten				[12184-31-5]
		104.6±4.2			[76/20]
C <sub>10</sub> H <sub>11</sub> NO <sub>5</sub> W	piperidine(pentacarbonyl)tungsten				[31082-68-5]
	(289–327)	106.4±1.0	(308)	ME	[79/19]
C <sub>10</sub> H <sub>12</sub> W	dicyclopentadienyltungsten dihydride				[1271-33-6]
	(313–323)	84.6±1.6		ME	[90/30]
		96.2±2.1	(298)		[82/20][79/24]
					[76/20]
C <sub>12</sub> H <sub>12</sub> W	dibenzene tungsten				[12089-23-5]
		106	(298)	ME	[74/37]
C <sub>12</sub> H <sub>16</sub> W	bis( $\eta^5$ -2,4-cyclopentadien-1-yl)dimethyltungsten				[39333-53-4]
		74.6±4.2			[80/37]
C <sub>12</sub> H <sub>36</sub> N <sub>6</sub> W	hexakis(dimethylamino)tungsten				[68941-84-4]
		89.1±7	(298)	C	[79/18]
C <sub>12</sub> H <sub>36</sub> N <sub>6</sub> W <sub>2</sub>	hexakis(dimethylamino)ditungsten				[54935-70-5]
		113.3±6	(298)	C	[79/18]
C <sub>23</sub> H <sub>15</sub> O <sub>5</sub> PW	triphenylphosphine(pentacarbonyl)tungsten				[26555-11-3]
	(340–364)	162.2±8.3	(352)	ME	[80/34]
C <sub>23</sub> H <sub>15</sub> O <sub>8</sub> PW	triphenylphosphite(pentacarbonyl)tungsten				[23306-41-4]
	(308–348)	120.2±6.6	(328)	ME	[80/34]
WCl <sub>4</sub> O	tungsten(IV) oxychloride				[13520-78-0]
	(396–447)	63.7±1.7	(421)	56	[83/30]
Y					
C <sub>15</sub> H <sub>3</sub> F <sub>18</sub> O <sub>6</sub> Y	tris(1,1,1,5,5-hexafluoro-2,4-pentanedionato)yttrium(III)				[18911-76-7]
	(310–365)	91.6±8.5		ME	[99/39]
C <sub>15</sub> H <sub>15</sub> Y	tris(cyclopentadienyl)yttrium				[1294-07-1]
		111.7±3.5			[82/20][74/23]
		99.2±3.3			[73/32]
C <sub>15</sub> H <sub>21</sub> O <sub>6</sub> Y	tris(2,4-pentanedionato)yttrium(III)				[15554-47-9]
		98±16			[84/34]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Y	tris(2,2,6,6-tetramethylheptane-3,5-dionato)yttrium(III)				[15632-39-0]
	(358–387)	151.0±0.8	(372)	TE	[01/6]
	(357–377)	153.1±0.4	(366)	TE	[01/6]
	(403–433)	135.9		TG, DTA	[97/8]
		117			[97/3]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element	Compound	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	CAS registry number	
				Temperature range (K)	Method
C <sub>32</sub> H <sub>40</sub> F <sub>12</sub> O <sub>8</sub> NaY	(382–412)	126	(397)	T	[96/4]
	(353–433)	117			[93/9]
	(353–433)	115.7			[93/9]
		138.5		GS	[90/15]
		66.5 (liq)		GS	[90/15]
	(363–418)	156.9	(388)	ME	[81/21]
		130.8		ME	[73/18]
	sodium <i>tetrakis</i> (1,1,1-trimethyl-5,5-trifluoro-2,4-pentanedionato)-yttrate				[12576-89-5]
	(418–503)	130±3	(460)	T	[93/4]
	(463–503)	142±12	(483)		[93/4]
Yb					
C <sub>15</sub> H <sub>15</sub> Yb	<i>tris</i> (cyclopentadienyl)ytterbium				[1295-20-1]
		108.8±3.5	(298)		[82/20][74/23]
		96.2±2.9			[73/32]
C <sub>15</sub> H <sub>21</sub> O <sub>6</sub> Yb	<i>tris</i> (2,4-pentanedionato)ytterbium(III)				[14284-98-1]
	(364–404)	93.3			[81/7]
C <sub>30</sub> H <sub>30</sub> F <sub>21</sub> O <sub>6</sub> Yb	<i>tris</i> (1,1,1,2,2,3,3-heptafluoro-7,7-dimethyloctane-4,6-dione)ytterbium(III)				[18323-96-1]
	(339–356)	154.8±3.3		ME	[71/25]
C <sub>33</sub> H <sub>57</sub> O <sub>6</sub> Yb	<i>tris</i> (2,2,6,6-tetramethylheptane-3,5-dionato)ytterbium(III)				[15492-52-1]
		131.1±2.7	(298)	DSC	[99/33]
	(363–413)	156.9	(388)	ME	[81/21]
	(410–444)	133.3	(427)	BG	[69/19]
Zn					
C <sub>4</sub> H <sub>16</sub> Cl <sub>2</sub> N <sub>8</sub> S <sub>4</sub> Zn	<i>trans</i> -dichloro- <i>tetrakis</i> (thiourea) zinc(II)				[28813-20-9]
	(351–382)	90±20			[70/11]
C <sub>10</sub> H <sub>14</sub> O <sub>4</sub> Zn	<i>bis</i> (2,4-pentanedionato)zinc(II)				[14024-63-6]
		132.6±8	(298)	C	[85/5]
		117±3			[80/30]
C <sub>10</sub> H <sub>20</sub> N <sub>2</sub> S <sub>4</sub> Zn	<i>bis</i> (diethyldithiocarbamate)zinc(II)				[14324-55-1]
		115±15	(298)	DSC,E	[00/40]
	(401–444)	143.1	(422.5)		[87/4]
		142.7±2.5		GC	[76/21]
C <sub>14</sub> H <sub>28</sub> N <sub>2</sub> S <sub>4</sub> Zn	<i>bis</i> (dipropylthiocarbamate)zinc(II)				[15694-56-1]
		147±2	(298)	DSC,E	[92/19]
C <sub>18</sub> H <sub>12</sub> N <sub>2</sub> O <sub>2</sub> Zn	<i>bis</i> (8-hydroxyquinolinato)zinc(II)				[13978-85-3]
		183.2±6.3	(298)	ME	[94/16]
	(473–513)	167.9±6	(493)	ME	[84/12]
		178±6	(298)		[84/12]
C <sub>18</sub> H <sub>36</sub> N <sub>2</sub> S <sub>4</sub> Zn	<i>bis</i> (dibutylthiocarbamate)zinc(II)				[136-23-2]
		107±3	(298)	DSC,E	[91/15]
C <sub>18</sub> H <sub>36</sub> N <sub>2</sub> S <sub>4</sub> Zn	<i>bis</i> (diisobutylthiocarbamate)zinc(II)				[36190-62-2]
		283±2	(298)	DSC,E	[94/33]
C <sub>20</sub> H <sub>16</sub> N <sub>2</sub> O <sub>2</sub> Zn	<i>bis</i> (8-hydroxy-2-methylquinolinate)zinc(II)				[14128-73-5]
	(437–556)	172.0±5.0	(541)	ME	[98/8]
		179.4±5.0	(298)		[98/8]
C <sub>22</sub> H <sub>38</sub> O <sub>4</sub> Zn	<i>bis</i> (2,2,6,6-tetramethylheptane-3,5-dianato)zinc(II)				[14363-14-5]
		136.0		ME	[73/18]
C <sub>22</sub> H <sub>44</sub> N <sub>2</sub> S <sub>4</sub> Zn	<i>bis</i> (dipentyldithiocarbamate)zinc(II)				[15337-18-5]
		127±3	(298)	DSC,E	[00/40]
C <sub>44</sub> H <sub>28</sub> N <sub>4</sub> Zn	5,10,15,20-tetraphenylporphine zinc (II)				[14074-80-7]
	(563–663)	213±3			[94/38][01/2]
		109	(666)	UV/Vis	[71/29][01/2]
Zr					
C <sub>10</sub> H <sub>10</sub> Cl <sub>2</sub> Zr	<i>bis</i> (cyclopentadienyl)zirconium dichloride				[1291-32-3]
		108.5±4.6	(298)	ME	[01/3]
	(393–457)	100.3	(425)		[87/4]
		105.0±2.1	(298)		[82/20][76/14]
		100.4±1.7			[77/23]
		96.7			[69/20]
		103±13	(298)		[68/19][01/3]
C <sub>12</sub> H <sub>16</sub> Zr	<i>bis</i> (cyclopentadienyl)dimethylzirconium				[1291-32-3]
		81.2±2.1	(298)		[82/20][76/14]
C <sub>20</sub> H <sub>4</sub> F <sub>24</sub> O <sub>8</sub> Zr	<i>tetrakis</i> (1,1,1,5,5-hexafluoro-2,4-pentanedionato)zirconium(IV)				[19530-02-0]

TABLE 7. Enthalpies of sublimation of organometallic and inorganic compounds, 1910–2001—Continued

Element Molecular formula/polymorph	Compound				CAS registry number
		Temperature range (K)	$\Delta_{\text{sub}}H_m^{\circ}/\text{kJ mol}^{-1}$	(T <sub>m</sub> /K)	Method
$\text{C}_{20}\text{H}_{16}\text{F}_{12}\text{O}_8\text{Zr}$	(333–363)	59		TGA	[00/35]
	(366–456)	$48.6 \pm 0.6$ (liq)	(411)	T	[96/2]
	<i>tetrakis(1,1,1-trifluoro-2,4-pentanedionato)zirconium(IV)</i>				[17499-68-2]
	(373–403)	94		TGA	[00/35]
	(368–398)	$133.6 \pm 2.0$	(383)	SMZG	[96/2]
		$118.7 \pm 3.1$	(298)	C	[92/7]
	(383–438)	$126.4 \pm 1.7$		GS	[85/16]
$\text{C}_{20}\text{H}_{28}\text{O}_8\text{Zr}$	(383–438)	$119.2 \pm 1.7$		GS	[85/16]
	<i>tetrakis(2,4-pentanedionato)zirconium(IV)</i>				[17501-44-9]
	(413–443)	126		TGA	[00/35]
	(403–433)	$138.8 \pm 2$	(418)	SMZG	[96/2]
		$125.8 \pm 2.9$	(298)	C	[92/7]
		$132.0 \pm 6.8$	(463)		[87/14]
		116±34			[84/34]
$\text{C}_{22}\text{H}_{20}\text{Zr}$	<i>bis(cyclopentadienyl)diphenylzirconium</i>				[51177-89-0]
		92.0±4.2			[76/14]
$\text{C}_{32}\text{H}_{40}\text{F}_{12}\text{O}_8\text{Zr}$	<i>tetrakis(1,1,1-trimethyl-5,5,5-trifluoro-2,4-pentanedionato)zirconium(IV)</i>				[56044-44-1]
$\text{C}_{44}\text{H}_{28}\text{N}_4\text{Zn}$	(388–423)	$134.9 \pm 1.6$	(406)	SMZG	[96/2]
	5,10,15,20-tetraphenylporphine zinc(II)	208±4		GS	[14074-80-7]
$\text{C}_{44}\text{H}_{76}\text{O}_8\text{Zr}$	<i>tetrakis(2,2,6,6-tetramethylheptane-3,5-dionato)zirconium(IV)</i>				[18865-74-2]
	(413–443)	120		TGA	[00/35]
$\text{ZrCl}_4$	zirconium tetrachloride				[10026-11-6]
$\text{ZrF}_4$	(405–518)	$98.9 \pm 0.5$	(512)	T	[94/22]
	zirconium tetrafluoride				[7783-64-4]
	(696–856)	$240.0 \pm 0.1$	(298)	TE	[94/36]
	(796)	243.0	(298)	MS	[65/14][94/36]
	(983–1177)	$241.1 \pm 0.1$	(298)		[64/9][94/36]
	(681–913)	$242.6 \pm 1.7$	(298)	MS	[63/9][94/36]
	(713–873)	$232.3 \pm 1.2$	(298)		[63/8][94/36]
	(983–1081)	$239.9 \pm 0.2$	(298)		[58/11][94/36]
	(890–1150)	$241.8 \pm 0.6$	(298)	GS	[54/9][94/36]

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### Unpublished Results

U/1 C. G. DeKruif (unpublished results).

U/2 C. H. D. van Ginkel, C. G. DeKruif, and F. E. B. de Waal (unpublished results).

U/3 H. Mackle, W. V. Steele, and D. V. McNally (unpublished results).

U/4 D. Stull (unpublished results).

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